

THIS WEEK

THE M.C.C.

"DAILY EXPRESS"

1,000 MILES RALLY

Fully Illustrated Report

SAGA OF "328" BMW by C. Posthumus

John Bolster, Russell Lowry, Dr. J. R. Edisbury, Philip Smith

> Vol. I No. 13 November 17, 1950



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EDITORIAL

INDOUBTEDLY the M.C.C. Daily Express 1,000 Miles Rally was an unqualified success, and must be regarded as a major motoring event. Organization on the whole was admirable, and the M.C.C. must be grateful to both its own officials and members of co-operating clubs for their unstinted help. Nevertheless the event gave rise to many grouses, particularly from the unfortunates who were held up at the foot of Bwylch-ygroes during the night. These competitors felt that the chief section marshal should have had the necessary authority to sign delay sheets indicating the total amount of time lost owing to obstruction. However, no such instructions were issued, and the Knighton control had no alternative but to class many competitors as having retired, even although the control was kept open for an hour after the specified closing time.

Another grumble concerned the results. The sheets issued by the M.C.C. gave no indication whatsoever as to where and how the competitors lost marks. A general impression was that with the aid of the Daily Express organization, some system could have been devised whereby competitors were provided with the information they sought.

The tricky kerb test also produced a crop of complaints that (a) the instructions were misleading, and (b) the starting marshal was often too hasty in dropping his flag. AUTOSPORT, however, considers that this test was perfectly fair, and that whilst a few drivers may have been penalized the large majority did attempt to do it properly.

AUTOSPORT would like to take this opportunity of congratulating all the winners of the various awards, and in particular the outright victors, Geoff Holt and Stan Asbury (M.G.), who not only came through with the late-starting Manchester contingent without loss of marks but put up best aggregate in the final eliminating tests.

It is interesting to read the remarks in club magazines about Autosport. In the current issue of the Lagonda Record, the Editor has done an excellent and well-balanced review of this magazine. He does, however, criticize us for opening our correspondence columns to what he terms the "lunatic fringe". We feel that everyone is entitled to an opinion, and if a few letters appear to have been written by the mentally unstable, the majority form an admirable cross-section of the viewpoint of followers of the Sport.

OUR COVER PICTURE-

ANGLE SHOT of Lew Tracey and his Dellow on Eaton Hill during the recent Sunbac "Vesey Cup" trial, George Phillips did some tree-climbing to get this.



1950 "Monte" winners, Marcel Becquart and Henri Secret studying their maps at Norwich.

Ten-LAP record for the revolving door at the Imperial Hotel, Torquay, formerly held jointly by Doug Lawton and Alan Rogers with 25 secs., was eventually lowered to 23\frac{1}{2} secs. by Ken Wharton.

Ring was headed by Bob Spikins in a natty yachting cip. Bob must have been fed up hearing cracks about "This way for the Skylark", "Round the Pier—a bob" and so on.

Proprietress of the Hydro Hotel, Paignton, refused stead ste

The Imperial Hotel, Torquay, on the other hand, entered fully into the spirit of the rally. An after Rally Ball party went on until well into the "sma' hoors".

Not so clever aspect of the big Rally was the way in which many competitors retained their rally numbers on their cars long after the event was finished. The road to London on Sunday was full of cars so equipped. We recall reading some regulation or other that numbers were to be handed in to the M.C.C. Secretary.

Half-litre racing types were much in evidence in the "1,000 Miles". The Cooper boys included Ken Carter, Billie Carter and Robin Law (Vauxhall), Eric Brandon (Austin A90) and Eric Winterbottom (Allard), who made up a team. Others were Alan Rogers (Austin A40), "Chiron" Brown (Citroen), Jack Westcott (codriver to Ashleigh Cleave, Vauxhall), Ken Wharton (Cooper), Stirling Moss (Aston Martin) and Jack Reece (Ford).

Pit and Paddock

Next week's AUTOSPORT will contain an illustrated report of the Harrow C.C. "Cottingham" trial, and a John Bolster "special" on the R.A.C. Veteran run to Brighton.

Bound volumes announcement in our issue of 3rd November contained an unfortunate misprint. The cost of the already-bound volume should have been £1 11s, and not £1 1s, as stated. Price of binding readers' own copies remains at 12/6d. Readers are asked not to send money with the orders nor to forward copies until notified.



A happy shot of Mr. and Mrs. Ian Appleyard in their XK 120 Jaguar, They were runners-up in the "1,000 Miles".

D'EVIAN Rally, organized by l'A.C. de Mont Blanc D'next July will tie up with an East Anglian rally to Ancy. The "D'Evian" takes place in the Hautes Alpes district of France, is International, and is limited to 100 entries. First Prize is £250. Marcel Becquart is President of l'A.C. de M.B., and is offering five cups for the East Anglian Rally. There will be an interchange of hospitality between the two clubs, as several members of the French club will be coming over for the R.A.C. International Rally.

Tracing cars, one complete and the other slightly "robbed". Intending purchasers must certify that (a) they are not German nationals (b) are not employed by German firms (c) will not resell the cars within a specified time (d) will not pay for them in currency of German origin. Genuine inquiries will be forwarded by Autosport to the proper quarter. Specification includes twin o.h.c., V-8 engines (63.85 × 58.58 mm.), 2-stage Rootes superchargers, Bosch ignition and 5-speed gearbox. Power output is over 220 b.h.p. at 9,000 r.p.m.

The M.C.C. "Daily Express" Rally

GEOFF HOLT (TD M.G.) OUTRIGHT WINNER—HIGH PERCENTAGE OF RETIREMENTS—KERB PARKING TEST DEFEATS MANY— UNLUCKY MANCHESTER CONTINGENT

Top-Line trials driver Geoff Holt of Didsbury, and co-driver Stan Asbury won the M.C.C. Daily Express 1,000 Miles Rally in a TD M.G. Runners-up were Mr. and Mrs. Ian Appleyard in a Jaguar XK 120; Len Shaw and Doug Lawton in a 11-litre M.G. saloon were third. M.G.s also won the team award (Grant, Shaw and Holt).

The event was far more strenuous than had been anticipated. Whereas little trouble was experienced from the eight starting points to Chester, the Welsh Mountains section which included Bwylch-y-Groes played havoe with the later numbers, and in particular with the Manchester contingent. In actual fact, twenty-one out of the fifty-eight starters from Manchester retired.

Provisional Results

Outright Winners—Geoff Holt, Stan Asbury (1,250 TD M.G.), 4,008 marks lost. Runners-up—Mr. and Mrs. Jan Appleyard (3,442 XK 120 Jaguar), 4.015. Third—Len Shaw, Doug Lawton (1,250 M.G. saloon), 4.229.

Ladies' Awards—I, Mrs. E. Altard, Mrs. E. Wood (4,375 Altard), 12.622; 2, Mrs. Joy Cooke, Mrs. B. W. Cooke (2,088 Standard), 13.093; 3, Miss S. Van Damm, Miss N. Van Damm (2,267 Sunbeam Talbot), 13.578.

Team Award—No. 3 Team—Gregor Grant, Len Shaw (1,250 M.G. saloons), Geoff Holt (1,250 TD M.G.).

Starting Control Awards—Plymouth—P. G. Weeks, M. R. Wiltshire (2,275 Vauxhall), 4.861. Norwich—G. A. Duff, A. E. Adams (1,506 Singer), 5.115. Harrogate—Mr. and Mrs. Ian Appleyard (3,442 Jaguar), 4.015. Cardiff—A. S. Bassett, D. Hamilton (2,443 Healey), 12.829. Glasgow—W. Shepherd, I. Mac-Lauchian (1,496 H.R.G.), 12.809. Leamington—Len Shaw, Doug Lawton (1,250 M.G. saloon), 4.229. London—H. J. Coombs, D. H. Laver (918 Morris), 5.078. Manchester—Geoff Holt, Stan Asbury (1,250 TD M.G.), 4.008.

Class Awards—Up to 1,100 c.c. (open)—J. H. King, M. D. King (1,074 H.R.G.), 4.677. (Closed)—H. J. Coombs, D. H. Laver (918 Morris), 5.078. 1,500, c.c. (open)—Holt, Asbury (M.G.). (Closed)—Shaw, Lawton (M.G.) 2,000 c.c. (open)—B. B. Davies, J. C. Dixon (1,767 Lea-Francis), 4.442. (Closed)—Duff, Adams (Singer). 3,000 c.c. (open)—J. G. Scarle, W. J. Scarle (2,443 Riley), 12.686. (Closed)—Weeks, Wiltshire (Vauxhall).

Conditions on Bwylch-y-Groes were, at times, extremely difficult. As the huge cavalcade wended its way to the mountains, with a myriad headlamps dotting the surrounding landscape like so many hundred glow-worms, thick cloud descended on the summit. Many drivers found visibility almost nil after negotiating the famous righthand hairpin; others were baulked by cars which stopped with burntout clutches, overheating and, in several cases, sheer lack of horsepower. By the time the bulk of the Manchester brigade arrived, there were large queues of cars waiting their turn, whilst marshals and others worked desperately to remove several vehicles from the rockstrewn "road".

This caused a long delay, and scores of people were late at the Knighton control. Consequently there were many grouses that no delays were recognized. However, it is difficult to see how a rally of this nature could be organized without there being hold-ups on difficult

sections. It appears to be a matter of luck whether or not early or late numbers are held up. At one time there was a state of near-chaos even amongst the Norwich contingent, the later numbers of which had a longish del y whilst marshals sorted out many folk who came to rest on the hill.

During the entire sojourn in Wales, the local people were out in force. Practically everyone in the towns and villages stayed up all night, and competitors were amazed to find their progress accompanied by enthusiastic cheering, waving of handkerchiefs and diligent number-spotting by children. One wonders what kind of reception a sort of Welsh Mille Miglia would have had!

The route-planning between Knighton and Ross-on-Wye controls was cleverly done. It is true, though, that there was one error in the route-card which was fairly obvious, and also an important signpost mysteriously vanished.

(continued overleaf)



Geoff Holt (left) and Len Shaw who were 1st and 3rd respectively in the general classification with M.G.s.



The winning M.G. team; (L. to, R.) Len Shaw, Doug Lawson, Geoff Holt, Stan Asbury, Gregor Grant and George Phillips.

The M.C.C. "Daily Express" Rally —continued

Scores of drivers lost their way, and a great many inadvertently by-passed sections of the route, including the famous farmyard.

The Ross-on-Wye control saw the majority of arrivals sign on and depart almost immediately. This was hard luck on a local hotel which had made ambitious plans for largescale catering in the ham-and-egg line.

The route through Wales is well worth recording. After leaving Chester competitors were taken to Bala via Mold, Ruthin, Cerrig-y-Druidon and Frongoch, and thence to the summit of Bwylch-y-Groes

by way of Dolgelley and Dinas Mawddwy. From the top of "Bwylch", the route returned down the other side of Lake Bala to Llanfair Caereinion via Llangynogg, Llanwddyn, Llangadfan and Neuadd, Knighton was reached by way of Bettws Cedewain, Newtown, Dolfor, Felindre and Beguildy.

From Knighton it was a mere 551 miles to Ross-on-Wye, via Presteigne, Kington, Clyro, Hay-on-Wye, Ewyas Harold and Pontrilas.

It was surprising the number of people who misread the instructions on the route-card between Hay and Ewyas Harold. "... and in 4 miles short of river bridge on outskirts of Longtown turn Left" was interpreted as something quite differ-

ent. Perhaps a comma between "miles" and "short" would have clarified things. The number of crews who reached the bridge, and then promptly motored back 4 miles to attempt to turn left was more than a few. Drivers seeing a string of cars returning down a road they were certain they had to take was, to say the least of it, slightly puzzlemaking.

Another good spot at which to get lost was just outside Pontrilas. The route-card stated a right fork at an obscure signpost marked Orcop. Obscure it certainly was; so much so that unless navigators kept a sharp look-out, it was easily missed altogether. This possibly explains why so many people found themselves either on the road to Hereford, or to Monmouth.

On all of the Welsh routes, the greatest difficulty was to pass other cars. People trying to make up time just could not get ahead of a long stream of cars, except on the infrequent main road stretches.

From Ross to Gloucester was trying because of fog. Although not exceptionally dense, it moved in patches and was sufficient at times to slow many cars to walking pace. Strangers to Bristol found the sign-posting to Bridgwater a bit odd. A38 "Bridgwater" mysteriously changed back again to A38 "Gloucester", and many passed under Chifton suspension bridge on the wrong side of the water, before realizing that they should have turned left earlier on.

Thereafter the route lay via Minehead and Porlock to Countisbury and Lynmouth Hill and the Blackmoor Gate control. The final hop was to Torquay and the sea-front tests.



Stanley Tett squeezes his Ford Anglia past a "scissored" articulated truck which partially obstructed the road near Appleby.

The three tests looked absurdly simple on paper. Number one was the rolling, "dead engine" brake affair beloved by the M.C.C. The second comprised forward and reverse over two sets of white lines, and the third was a reversing, kerb-parking test.

This last was a real hopes-killer. Dozens of well-known figures in the competition world failed to finish up with their wheels less than 13 infrom the kerb and/or the rear wheels over the white line. Even the London taxi-driver boxed it, as did Ken Wharton in the Cooper 2-seater.

So much then for a general picture of the event. Now what about the cars and their crews? How did they fare? Stirling Moss and Lance Macklin introduced the DB2 Aston Martin to rallies, finished without loss of road marks, but did not figure in the awards list. They did, however, put up some sort of record or other, in the times taken between controls.

P. R. Jefferies and G. T. Wilby (Citroen) had the complete transmission replaced in two hours by Norman's, the London Citroen distributors. Ken Wharton and J. Dorsett in the very interesting Cooper 2-seater did some experimenting with brake linings en route. This little car, together with the Aston Martin, probably attracted more



R. H. Lambert and L. G. Wright with their 20-year-old Standard "Ann Teak" at the Keswick control.



A view of the Keswick control occupied by starters from Norwich.

attention than any other vehicle in the rally.

Marcel Becquart and Henri Secret (Hotchkiss) were banned from official participation by L'A.C. de F., as the rally was not an International event. However, the Monte Carlo Rally winners went through unofficially, only to retire with a broken piston half-way through. Roy Clarkson (Ford Pilot) sportingly gave up all chances of finishing, by assisting the Frenchmen to get their car to a garage,

J. M. Crowley and M. J. Woodjer covered most of the road section in their veteran PB M.G. without front wings. Stanley Tett and M. G. Lucani plugged on in their Ford Anglia, which had many thousands of miles on the clock, and came through without road marks penalty. P. C. E. Harper and J. H. Park (Hillman Minx) were eliminated when a car in front suddenly stopped without warning. Alan Rogers and Dick Hughes (Austin A40) coming up behind, were unable to avoid sandwiching the unfortunate Minx.

Godfrey Imhof and Raymond Baxter, in Dick Jacobs's T.T. classwinning TD M.G., arrived so early at Doncaster that they were able to put in more than a couple of hours' sleep—in a local emergency hospital?

J. E. Verdin and C. E. Chrysler (Jaguar) were left feverishly working to rectify a seemingly untraceable electrical fault when the Chester control closed. They got away some time around midnight.

by photographer George Phillips, reported that his M.G. saloon had been tailed for several miles in the Wigan area by a persistent police car behind which trundled a column of competitors' cars at a steady 25 m.p.h. Russell Lowry was in Mr. and Mrs. Colin Edge's Standard Vanguard, All three were as bright as Northern Lights.

Mrs. M. Daniels (Morris Minor) and her daughter Diana mislaid their time card at Chester, and managed to find it with only seconds to spare. They pulled away to the cheers of a sympathetic crowd. Barry Davies (Lea-Francis) clocked in with co-driver Geoff Dixon sound asleep in the back seat.

L. McCann and W. Dehany (Austin) experienced plenty of trouble en route, and were so exhausted that they retired. E. R. Wetherall's Morris Eight was the car in which he gives professional driving

(continued overleaf)



Phil Chapman (Mercury Special) during his remarkable 14 secs, performance in the forward-and-reverse test.



(Above). Appleyard's Jaguar draws up neatly beside the kerb during the tricky parking test.

(Below). Next time you take a cab you'll know why you have such a long step from the kerb. Smith's taxi in the parking test.



The M.C.C. "Daily Express" Rally -continued

lessons. Sam Gilbey (Alfa-Romeo) managed to lose his way between York and Chester, but checked in on time after a rather hectic dice.

C. S. Ware and H. Young (Morris Eight) forgot to sign the arrival sheet at Chester. Maps of the Welsh mountains section were at a premium in the town. Marcel Becquart dashed into a shop, and knocked down a large display of Christmas cards. With true Gallic courtesy he won over the assistant and, after two more visits to shops, gained possession of a set of maps.

Third man Gordon Bedson in the Richard Twelvetrees-Alan Brown Citroen worked out an admirable time schedule with careful route indication. The crew still managed to lose themselves in the Knighton-Ross section. R.A.F. types Sqdn.-Ldr. C. V. Beadon and C. A. C. Jonas, D.F.C., had the driving compartment of their Armstrong-Siddeley closely resembling an aircraft cockpit. Their equipment included oxygen masks, which, they maintained improved night visiona whiff for a couple of minutes every two hours is apparently standard R.A.F. practice.

The state of some of the 1950 "Monte" cars was recalled when the J. Wiseman-Alick Pitts Allard trundled into Chester with the frontend squashed in. They ran into the back of a Trojan van near Doncaster. P. J. Morgan and R. Lindley drove what was probably the oldest car in the rally, a 1923 3-litre "Red Label" Bentley, Youngest competitor was H. R. Canning (Austin) who passed his driving test barely three months ago. He retired between Knighton and Ross.

G. Smith and G. B. Dunleavy arrived at Chester with time to spare in their Austin taxicab. It may be a professional tip worth passing on that they kept their windscreen and windows clean with sour milk! Total avoirdupois of the three-man crew of R. F. Twynham's Rover was

481 stone.

R. H. Lambert and L. G. Wright had a colossal spot-lamp on their 1930 Standard Nine. This veteran, christened "Ann Teak", ran like a bird for the entire distance and lost no marks on the road section.

Most of the controls were excellently organized. The Norwich starters were each presented with a nifty dip-stick cleaner by Roland C. Bellamy Ltd., the Grimsby motor agents, who had also put on a first-rate running buffet. Nothing was too much trouble for Mine Host and his staff at the Blackmoor Gate Hotel, Many hundreds of bacon and egg breakfasts were served, and facilities were provided in bedrooms for washing, shaving and general tidying up.

Unfortunately the weather broke down for the Torquay special tests, although many hundreds of interested spectators braved the elements. Tony Curtis was there, complete with Antone, to announce times in the reversing test.

Concours d'Elegance

Class A (Open)—C. Oldbury (Sunbeam Talbot). (Closed)—C. W. Sweet (Riley).

Class B (Open)—W. A. Merifield (Jagwar). (Closed)—A. L. Williams (Armstrong-Siddeley).

Class C (Open)-E. S. Sneath (Bentley). (Closed)-Lt, Cmdr. M. Allison (Lagonda).

Class D (Open)—I, J. P. Musitano (Morgan 4-4); 2, A. G. Imhof (TD M.G.). (Closed)—I, C. Holden (Triumph); 2, C. G. H. Dunham (Hillman); 3, Mrs. S. J. Fleetwood (Ford).

Class E (Open)—Mrs. V. J. Gardiner (Austin). (Closed)—I, D. Bollom (Riley); 2, G. F. Hayward (Riley); 3, L. Tanner (Sunbeam-Talbot).

Class F—(Open)—1, E. I. Appleyard (Jaguar); 2, B. N. Wilmott (Marauder). (Closed)—1, Lt. Col. J. R. V. Dolphin (Jaguar); 2, J. A. Coulthard (Austin); 3, J. E. de Bont (Sunbeam-Taibot).

Class G (Open)—S. J. Gilbey (Alfa-Romeo). (Closed)—1, H. F. Brayshaw (Rolls-Royce); 2, A. J. Tatham (Bentley).



Stirling Moss and Lance Macklin leaving Chester control in their DB2 Aston Martin.



Oldest car in the rally; P. J. Morgan and R. Lindley at Chester in their 1923 3-litre Bentley.



Ken Wharton (Cooper) includes in paniomine to explain the why's and wherefore's of brake fade —a Chester control shot. Later on, on the Friday evening, the Mayor and Mayoress of Torquay gave a cocktail party to the crews and officials in the Imperial Hotel. This was a full-house affair, and it was almost impossible to get hold of anything in the way of refreshments.

The Concours started off on Saturday morning in fine weather with some 200 cars lined up for the judges' inspection. Down came the rain again, accompanied by squalls, and most competitors sought

(continued overleaf)



64 C. Oldi ay's Sunbeam-Talbot "Ten"-a Concours class-winner.



(Above). Sam Gilbey's Alfa - Romeo which won its class in the Concours.

Ken Rawlings and Colin Edge of the Standard Vanguard team, at Chester, Mrs. Cooke was runner-up for the Ladies' Award.



(Left). Geoff Holt receiving the "Daily Express" Trophy from the Mayoress of Torquay,

The M.C.C. "Daily Express" Rally

—continued

refuge in their cars. Incidentally, amongst the most admired cars were Moss's Aston Martin (rather battle-searred), Gilbey's Alfa-Romeo, Appleyard's XK 120, Magnani's Farina-bodied Lancia Aprilia, Wilmott's Marauder, Tatham's Bentley and Brayshaw's magnificent Rolls-Royce.

In the evening the Mayor of Torquay, Alderman T. F. Adams, J.P., presented the awards at the Rally Ball in the Town Hall. In the course of a short speech, he expressed the hope that the rally would become a permanent fixture. Mr. Christiansen, Editor of the Daily Express also spoke, and Jackie Masters of the M.C.C. was prevailed upon to say a few words.

More Rally pictures will appear in next week's AUTOSPORT.

NOTES: Several cars were shod with "Wyresoles" which proved their worth on greasy roads, especially in the Welsh mountains area.... Many drivers complained of continuous dazzle on main roads, particularly on A1.... One car burst its petrol tank on Bwylch-y-Groes and fifteen gallons or so poured down the hill. . . . Local police were generally most co-operative, and Norwich competitors were loud in their praises of the men of Grimsby. . . . Torquay tradesmen and hotel owners rubbed their hands at the amount of business brought to the town by the rally.



RUSSELL LOWRY's

Northern Lights

"INSTRUCTION" BOOKS—THE "MONTE"—
SERVICE—OLYMPIC TRAGEDY—
NORTH STAFFS PLANS

A support of the remarks made some weeks ago by our Editor about the paucity of modern instruction books, but I am indebted to Colin Edge for the following story which illustrates the danger of issuing any instruction book at all with a new car. Admittedly, the incident took place some time ago. A certain family acquired a motor car and caused their general knockabout retainer to be trained as a driver. The instruction book was consulted and religiously followed in all matters of care and maintenance, until the great day arrived when the retainer announced that the "vital first 500 miles" had been completed, together with the operations recommended at that stage. "Very good then," said the Master, "depress your foot firmly upon the accelerator pedal while I observe the delicate swing of this speed recording instrument. Let us, in fact, see what she will do." After a mile or so, there was a series of extremely expensive noises, and the great car came to a painful standstill. "James," said the Master, "there would appear to have been an internal disturbance. How do you account for that?" "Dunno, sir, I've done everything wot it said in the book. Seeing as 'ow she'd done 500 miles. I let the oil out of the engine, gearbox and back axle only this morning." I think the story may tactfully end there. There was no mention in the instruction book that fresh oil should be inserted in these useful components.

At the keen types seen last week-end were intending to "have a go" at the Rhyl and District Club's Regal Cup Trial which takes place on 19th November. This Trial started in quite a small way two years ago, and is now well on the road to fame, which just shows what can be done in a short time given the necessary enthusiasm. There is plenty of really steep country in the immediate hinterland of Rhyl, but the area is outside the usual trials zone of North Wales, and can be counted on to provide something interesting.

White final preparations were being made for the 1,000 Mile Raily, and much feverish anticipation was being indulged in over the Welsh section of the route the list of acceptances for the Monte Carlo became available. At the moment of writing, heartburn is a prevalent complaint in the north, although a pretty representative body of entrants from this part of the world has been taken, including Colin Edge, who won a high place among British competitors last year, Tommy Wise, a former class winner, with a Jowett, and the

Reece cousins, who won their class in the Tulip Rally. The brothers Reg and Geoff Holt are entering Fords, and Arnold Pownall, who struck gearbox trouble in the Lisbon Rally, is having another try with his M.G. Ken Rawlings and George Milton are Vanguard exponents, while Colonel Jimmy Finnegan, who has been competing in railies for longer than most is taking a Wolseley. He made the Monte Carlo trip as long ago as 1928, with a Riley. In that year, there were only twelve British competitors, nine of whom started from John o' Groats. How times have changed

THESE modern communications do come in handy sometimes. Cyril Corbishley went down for the Vesey Cup Trial, had a nice day's motoring, and then went home. Turning on the wireless, he heard that he had won the principal trophy.

Onto Show for a long time, and decided that this year, he would make the expedition, and do a little window shopping. Being a careful soul, he organized everything down to the last detail, motored himself down (sorry, up) to London, arriving dead on schedule at a carefully located parking place. He paid his parking fee, carefully locked his car, and with an empty brief case (for catalogues) under his arm, presented himself at the turnstiles where he handed over a neatly folded 10s. note. With shining eyes, and a deep breath of anticipation, he entered the exhibition hall—to find himself confronted by a superb milking machine. He had gone to Olympia!

More news is to hand about the North Staffordshire Mclub, whose highly diverting Test event at Attingham Airfield was noted recently. The body is a new one under the Chairmanship of Roy Taylor, with the support, among others, of Ken Downing, Cecil Heath and Alf Hitchings. In the near future, they are making a collective visit to the Austin Works, and later in the month, are gathering with the Midland Motor Enthusiasts' Club for a "Pint and Prattle". The first annual dinner and dance will be held in December, and then, in the New Year, they plan to have a "rather ambitious week-end rally". Beyond that, the Attingham event will be repeated, and there are hopes of a full-blooded race meeting next season, to which end, talks—in the best diplomatic sense—are being held with the Severn Valley Club.

The Overhead Camshaft M.G.s

Their Overhaul, Maintenance and Tuning

A SSI MING that the cyander bores and pistons have been Adealt with as determined by their condition, and in the manner described in the previous instalments, attention can next be given to the cylinder head. First examine the valve guides. These wear very slowly, as lubrication is ample. Inlet valve guide wear is in fact often shown up by persistent plug oiling, due to excessive lubricant being drawn down the valve stem during partthrottle operation. Very careful visual examination may show that the guides have worn eval. Trying the fit of a new valve of each type (inlet and exhaust) will show whether clearances are excessive. When making this check, it should be borne in mind that quite a lot of running clearance is necessary, and is not detriment; I. If the clearance is too small, a tendency to sluggish valve operation at high speeds may be apparent. For the inlet valves about .003 in, should be right; aim at not less than 002 and not more than .004 in. A shade more can be allowed on the exhaust valves, and .003 to .005 should be satisfactory

If it is thought after checking, that the guides require replacing, the removal of the old guides and refitting of new ones should be entrusted to our friend the M.G. specialist. This is an operation requiring a good deal of care and know-how, and is worth having done properly. It might be as well to suggest here that if, having gone so far in dismantling the power unit, the condition of these small parts—valve guides being typical—leave one undecided whether to renew or not, get them renewed.

This will prove most satisfactory in the long run.

Valves-Recut or Renew

If the valves have been subjected to much grinding, the valve seats will in all probability be somewhat pocketed. If this is the case, they should be recut by a professional. This recutting will restore the original freedom of gas flow; it is not generally realized how much power can be lost because of valves which are only slightly pocketed. Recutting the seats also ensures that there are no doubts about the dimensional accuracy of

the seat in relation to the valve guide.

Naturally, if any of the valves show evidence of burning or bad pitting they should either be replaced or have the faces recut, again by a specialist. If they are of considerable age it is probable that, in addition to defects on the valve face, some wear of the stem and split collet groove will have taken place. Possible sources of future trouble in this part of the engine are to be avoided, so if in doubt, the valve should be scrapped. If it is considered that so far, a policy is being recommended of ruthless throwing away of perfectly satisfactory material, it is pointed out in explanation that the items concerned are relatively inexpensive but vitally important to the engine's reliability.

Before examining the remaining parts of the valve assemblies with a view to relitting, it will be as well at

by Philip II. Smith A.M.I.Mech.E.



this stage to take a look at the valve ports. These are extremely well finished in the o.h.c. engines, but nonetheless, quite a lot can be done with emery cloth and elbow-grease to obtain a high finish on the inside of the ports. The inlet port is of course for more important in this respect than the exhaust, so the inlets should be tackled first whilst enthusiasm is at its height! No attempt must be made to cut away the valve guide protrusions into the ports, as for the moment we are not concerned with such drastic "mods".

Aligning the Induction Pipe

The lining-up of the induction pipe with the inlet ports in the head is a matter of great importance. As the four ports are of circular section, and the induction pipe of light alloy, it is not a difficult operation, but pays dividends in performance. If the inlet manifold is bolted to the head (without any packing washer) the degree of truth in the fit can be gauged to some extent by inserting a flexible "probe" such as a length of Bowden outer casing, through the port and past the flange joint. Such a test is rather of the hit-and-miss variety, and a more satisfactory method is to cut a sheet of white cartridge paper to the shape of the manifold flange, complete with stud-holes but without the port-holes cut. The f. ces of the cylinder head and corresponding manifold flanges should next be smeared lightly with graphite, and the manifold bolted up to the head with the paper interposed between the flanges. Upon removal, it will be found that the port and pipe apertures are clearly defined one on either side of the paper, and any discrepancy in their relative concentricity is easily seen and corrected. Remember when getting to work on the induction manifold that it is quite soft metal, and it is very easy to remove too much. The same care in liningup is not so important in the case of the exhaust manifold; just as well, as this component is made of extremely hard tron. If there is any variation in dimensions it is desirable that the entry to the manifold should be of slightly larger drameter than the exit from the cylinder port. This condition can be achieved by enlarging the manifold openings by means of a grinding wheel on a flexible shaft.

Machining the Cylinder Head

Having completed work on the ports, the only other attention likely to be required as regards the head casting, is machining for compression ratio. It may be that the owner will wish initially to get_the engine_to its peak condition as standard, before doing any hottingup. However, there is something to be said for carrying out this machining operation while the head is in a suitable state of undress, particularly since there is little question but that the original compression ratio of the P type engine—6.4 to I—is somewhat on the low side, even with present-day fuels. Quite a difference in liveliness can be obtained, without sacrificing any other qualities, by machining off 3 64 in. This raises the ratio to 6.7 to 1, and the total depth of cylinder head after machining should come out at 3 19,32 in. Checking of this depth will serve as a guide as to whether the head

has already been "planed". As a further example, the L type Magna (6-cylinder) has an even lower ratio—5.7 to 1. Removal of 1/16 in. gives 6 to 1, leaving the total head depth 3 25 64 in.

The above increases in compression ratio are of course by no means the limit, but if it is desired to go any higher, the Works should be consulted, giving full details of the fuel which it is proposed to use. In the middle 1930s many P and PB units were operating quite happily on ratios up to 8 to 1, using the late-lamented Ethyl or Discol.

(To be continued)

Technicalities Without Tears

by Dr. J. R. Edisbury

Keeping Well Oiled

There are many possible variants of the same general scheme, but the only one of immediate interest here is the reduction of friction and consequent wear between solid metals. The converse problem of achieving satisfactorily intimate contact between rubber and road when everything conspires to prise them apart is "Mr. Good-

lop's" head, che

Under high magnification all non-porous metal surf ces, even well-polished ones, look rather like irregular files. A pair of identic, I files, pressed together, interlock almost immovably because the teeth synchronize. Two dissimilar files (siy, one fine, one coarse) can be moved relatively, albeit a little jarringly, because they are in contact at only a few points at a time. So with polished metals; contact occurs only here and there, and any micro-points that catch against each other are bent, broken, and/or rounded off when movement occurs. But these contact points of infinitesimal area take the entire load. On them, the local pressure per square inch is immense and can cause tiny welds and tearing of metal. The number and hence the total area of "points" in contact is proportional to the load; which rather belatedly explains our school-day puzzle of why dry friction is proportional to load and apparently independent of superficial area—the larger the gross area, the further apart are the contact points, so that for the same load the real contact area remains the same, but increases if the load is increased, because the number of points increases. In the process of running-in, the originally spiky surfaces have their sharp points knocked off or flattened. Not only is the loading per unit area of contact reduced but the remaining projections are less able to penetrate right through the oil film, and better able to support a small layer of adsorbed lubricant of their own. Once running-in is complete, there should be no further solid contact and, ideally, no further wear. That further wear does in fact occur proves that occasional solid contact, possibly through foreign bodies in the oil, possibly through film breakdown, does happen now and again.

One of the more popular ideas about lubrication is that oil or grease consists of little hard spheres, I ke miniature bills in a bill bearing, propping the surfaces apart. Molecules of any known lubricant are, however, far too small to stand proud of even the timest projections. How, then do they work?

then, do they work?

Broadly there are two distinct types of lubrication—
(1) boundary lubrication, called into play only at low rubbing speeds and high loads (e.g. spring shackles, gear teeth), and (2) viscous or fluid-film lubrication, which can better cope with high rubbing speeds (e.g. big ends) but is apt to revert to (1) under excessive loading or if the speed falls. Seizure (following actual metallic contact) cannot occur so long as condition (2) is maintained; but under (1), high speeds and high loads may together generate enough friction to burn off the lubricant and produce expensive noises.

A Matter of Molecules

In the limit, just short of seizure, boundary lubrication is a matter of molecules rather than measurable films. but these molecules do not roll-they are firmly anchored end-on to the metal surface like the pile of a carpet, attached so strongly that ordinary wiping will not remove them. They have to be machined, burnt or chemically dissolved off. So-called compound oils containing fatty acids form a particularly adherent layer which can chemically be regarded as a soap. Ordinary washing soap is the sodium salt of certain fatty acids; the boundary layer is the result of a similar chemical or near-chemical combination, not mere contact involving the metal surface and the oil. Other lubricants achieve much the same effect by a physical process called adsorption, but it is a matter of semantics just where to draw the line between the physical and chemical, or whether indeed there is in this context any practical distinction. In either event, the result is the same, a soft "pile" of up-ended molecules firmly planted on the metal and providing a secondary surface for the main body of oil to work on. Two such velvety surfaces in contact at the high spots slide relatively

(continued overleaf)

Keeping Well Oiled-continued

easily over each other—relatively, that is, compared with metallic contact, but still pretty stiffly compared with viscous or fluid-film lubrication.

Viscosity, or reluctance to flow, obviously has a hand in preventing the too-rapid squish-out of oil from between two surfaces pressed hard together. The time factor is important. The film may stand up to sudden shock (e.g. in push-rod sockets) but under even quite light continuous pressure, boundary conditions will ultimately supervene unless there is some means of constantly replenishing the film. One of the more obvious ways is to provide a pressure-feed of lubricant. Air itself under high pressure can be used in certain favourable circumstances as a lubricant, but it won't stand sudden changes of load. Remembering, however, the success of old-time splash feed lubrication (on which quite a lot of our modern engine oiling still depends) pressure feed is seemingly more a means of ensuring a copious flow of oil as a coolant, than of prising metal surfaces apart. This is done by the oil film itself.

Natural Resistance to Shearing-Stresses

An oil film can be regarded as made up of an almost infinite number of parallel layers, the two extreme (boundary) layers being anchored to the metal surfaces, and those between moving in shear relatively to each other, like sheets of paper lying in a pile on a table when the top of the pile is pushed sideways. The natural resistance to shearing-stresses manifests itself as viscosity. Now if the moving boundary surfaces remain dead parallel, the film soon collapses unless the feed pressure is sufficient to maintain it. But if the surfaces are slightly inclined to form a wedge of oil with a taper of one in a few thousand, and the direction of motion is such that the oil is squeezed into the thin end of the wedge, separation is maintained so long as the oil can get there, independently of the feed pressure. The surfaces are wedged apart by the oil; if you like, they surf-ride on it. This is the principle of the Michell thrust bearing used on ships' propeller shafts to prevent the engine being pushed out through the bow, which makes the front end look untidy. A plain rotating disc thrusts against a stationary disc made up of several flat segments pivoted at their centres of pressure, about two-thirds of the way back from the leading edges. The whole assembly dips in an oil bath and metallic contact is prevented solely by the pressure generated by the oil wedges.

The Oil Film Under Load

A ball or roller thrust race would do the same but is better suited to smaller sizes and higher rotational speeds. The point or line contact in a ball or roller bearing necessarily results in a local squeezing out of any oil film under load, though since the action is a rolling one, rubbing should not occur, or is at most very slight, and metallic tearing is rare. Conditions favour the formation of an exceptionally tough hard skin. It is possible that at high speeds, under light loads, and with fairly viscous lubricant flooded into the bearing, floating or "surf-riding" may occur; but, in general, boundary conditions obtain. In fact, there is some truth in the saying that apart from the cooling effect, a ball or roller race needs

little more lubricant than enough to prevent it rusting and rattling.

Plain Bearings

In a plain bearing conditions are quite different. The shaft is not central but very slightly eccentric to one side -a matter of a few ten-thousandths of an inch in a car engine. If the shaft rotates in a clockwise direction and is loaded from above, the point of nearest approach is near 8 or 9 o'clock. The curved wedge of oil underneath holds the shaft up with considerable force, and the ideal place to feed oil into the bearing, where it will in fact be sucked in, is in the region of 12-2 o'clock. Excessive clearance, as in a worn bearing, makes the wedge too blunt to be effective, even with thick oil, quite apart from leakage at the sides reducing the supporting area. Too tight a fit, on the other hand, prevents wedge formation and limits lubrication (if any) to boundary conditions. Grooves for distribution of oil should be in the low pressure area and have chamfered trailing edges. Finally, the viscosity of the oil should be just enough to maintain a wedge. Anything thicker wastes power and generates unnecessary heat. Nevertheless, some small margin of safety is obviously destrable.

Porous metal bushes, made of metallic particles pressed together and heated until adhesion occurs between grains ("sintering") without fusion into a homogeneous mass, can carry a great reserve of oil in their pores. Under load, enough is squeezed out to meet the passing need, and when the load is released the oil returns to its crannies. For purposes where movement is limited or oscillatory, and loads are not too heavy, these are ideal, for they have a long life without need for periodic lubrication. As an extension of this idea to more arduous conditions, by careful control chromium can now be deposited as a visually and tactually smooth but microscopically porous layer that retains oil well. This avoids the difficulty encountered during early attempts at plating cylinder bores, when the polished chromium sheds its oil so quickly that the film barely lasted from one stroke to the next, and had to be replenished by the piston from the lower unchromed part of the bore.

Oil Additives

One hears a great deal nowadays about oil additives, detergents, inhibitors, and the like. The idea is to strengthen and improve the boundary layer, wash it free from solid particles that might imbed in it and form an abrasive surface, and prevent thickening of the oil with gummy (rather than viscous) oxidation products. Such additives confer real advantages only when used judiciously: a little detergent can benefit, for example, but over-enthusiastic use may wash off not only the particles but also the velvety pile. High-pressure additives are used in axles, particularly hypoid, to maintain a layer capable of coping with the greatly increased boundary loads between teeth. An interesting idea that never caught on but might be worth reviving in modified form was the incorporation of a zine compound which under high pressure was alleged to deposit metallic zinc on the teeth as fast as it wore off, so that the teeth themselves never wore at all. Perhaps someone can confirm, amplify or deny this

Graphite is a solid boundary lubricant that goes back

to antiquity. Its action depends upon its microscopic structure-tiny smooth flat plates that will stick to many surfaces, yet slide freely over each other. It is at its best when the plates are so fine that if they are dispersed in an oil they will not settle out. This is called "deflocculated" or colloidal graphite, and the non-settling is due to an electric charge carried by the particles and causing mutual repulsion. In the process of running-in a cast iron surface, the original microcrystalline structure is changed to a smooth amorphous matt layer (the Beilby layer) containing graphite derived from the carbon already present in the iron. Addition of colloidal graphite to the oil greatly hastens this process. The new surface is not only smoother than usual but retains its boundary layer of oil better. Many a bearing has been saved from premature demise by microscopic plates of graphite preventing metallic contact at the high-spots, pending the arrival of a fresh supply of oil.

Despite recurrent accusations, colloidal graphite has never yet demonstrably choked a filter or oilway, nor damaged a bearing. Such mishaps, on investigation, turn out to be caused by the misguided use of flake graphite (fire-place "blacklead") which can be gritty as well as forming a sludge; or, very occasionally, by the coagulation of an overdose of colloidal graphite by a wholly unsuitable oil that should never have been in an engine

anyway.

A new line that shows promise, though certain chemical snags must yet be overcome, is the use of molybdenum disulphide in oil. Molybdenum disulphide particles are

flat like graphite, but consist of layers of two distinct elements chemically combined, molybdenum (a metal) and sulphur (a non-metal) arranged like a sandwich with the molybdenum as jam. These particles stick flat on almost any metal surface, and slide easily over each other; the sulphur has an affinity for metals but not for itself. We shall hear more of this before long.

We shall also hear more of another comparatively new line, silicones. These form a chemical series with remarkable properties. Some members of the series are such potent water-repellants that an invisible layer can make a flimsy frock waterproof. Others are oily in nature and are already on trial as lubricants. One of the great attractions is an astonishingly low viscosity/temperature gradient-that is, a silicone lubricant thin enough not to gum at low temperatures is hardly any thinner at quite high running temperatures—and a further attraction is that much higher than usual temperatures can be withstood without decomposition. But decomposition must be avoided. An ordinary oil burns into comparatively innocuous products, carbon, carbon dioxide gas, water; but a burnt silicone leaves behind it something more akin to wet sand, which is said to be A Bad Thing in an oiling system.

In Dr. J. R. Edisbury's article "Bitthe Spirit", in AUTOSPORT, 6th October, 1950, an unfortunate misprint occurred on p. 212, col. 1, line 15 from bottom, where "unsatisfactory" should read "satisfactory". As it stands, the sentence does much less than justice to three great engineers.

Sports Racing Specialist



For many years Dick Jacobs has remained faithful to the marque M G., racing self-tuned versions of various models including this very TA-cum-TC-cum-Morris 10 machine with which he has gained several victories. His inclusion in John Thornley's team of TD Midgets was a just reward for his success, and as a result Jacobs was able to add a class win in the Tourist Trophy, and runner-up in the 1,500 c.c. class in the Daily Express One Hour Production Car Race to his ever-growing bag. This picture was taken when he won a handicap race at Goodwood with his own "eleven-hundred".



Saga of the "328" BMW

By C. POSTHUMUS

A Detailed History of One of the Most Successful Sports Cars of Our Time.

It is significant to reflect that when A.F.N., Ltd. of Isleworth, Middlesex, makers of so highly revered a speed vehicle as the chain-driven Frazer-Nash, introduced the German BMW design to the British market in December 1934, they started no small revolution among sports car schools of thought over here, a revolt which has since led up to the sleek, well sprung modern conception of the sporting vehicle. Still largely de riqueur at that time were bodies with pseudo Le Mans rakishness but little comfort, slab rear tanks, open wings, ostentatiously strapped spare wheels and a fruity exhaust note, while head-in-sand manufacturers, offering unsympathetic semi-elliptic springing, were busy maintaining that this i.f.s. business wasn't worth the trouble.

And then these BMWs came along, costing no more than many another good sports car and much less than some, insolently sporting comfortable bodywork, valanced wings, and wheels which remained on the ground all the time and which, on some models, were—yes, positively—of disc pattern! When, moreover, these violators of the status quo calmly and with complete lack of fuss proceeded to mop up practically everything in their class in British sporting contests, then it became

obvious that this new BMW would have to be taken seriously indeed.

BMW Beginnings

As car manufacturers, the Baverische Motoren Werken of Munich were comparatively young, but had long reached pedigree standards with their aircraft engines and high-performance transverse twin shaft driven motor-cycles. It was in, or about the year 1931—the exact date is regrettably clusive—that BMWs took over the German Dixi car manufacturing concern at Eisenach, deep in the "green heart" of Germany. Dixi were a well established German make, their products chiefly of the utilitarian class, although one or two had raced at the Avus track in Berlin's Grunewald in the early 'twenties. Like Rosengart of France and the Bantam Co. of the United States, so Dixiwerke of Germany. recognizing a good thing when they saw it, secured I cence to manufacture the British Austin "Seven" at their Eisenach plant, large numbers of the German edition being produced until the firm's absorption by BMW.

BMW continued to manuf, cture the little car awhile, substituting their name for that of Dixi, but concurren ly begin developments of their own, under the technical direction of Dr. Fiedler, first with o.h.v. heads and then with a larger power unit of 1,174 c.c. "B by" BMWs, with 743 c.c. o.h.v. engines ran successfully in sundry German events, notable drivers being "Bobby" Kohlrausch, I ter a successful M.G. exponent, and Ernst von Delius, subsequen ly an Auto-Union G.P. driver, Two BMWs ran inconspicuously in the 1933 Alpine Trial, but in this event the following year a new BMW design, a 1,490 c.c. pushrod o.h.v. 6-cylindered car called the Type 34, did extremely well, so well, indeed, that it attracted the attention of the Aldington brothers of Frazer-Nash, a team of which cars were narrowly beaten by the BMWs for the 1,500 c.c. Team Prize.

Justly proud of the Frazer-Nash, with its stark good looks and vivid performance, the Aldingtons were yet conscious of the limitations of their somewhat "blood and sand" motor-car. Even a "lifer" in the "Chain Gang", faced with the need to attend, unblemished, a social or business function, could sometimes yearn for glass side-walls and a roof.

Thus the brothers set out to supplement their spartan "joy vehicle" with something more refined and gentlemanly, yet unbereft of that zip and zest so characteristic of the marque. The A.F.N. staff, in consequence, were at work on a prototype in 1934, when along came the Alpine Trial and the Type 34 BMW, which the Aldingtons decided was the very thing they sought.

Negotiations were forthwith begun with BMW to market a British edition the Eisenach concern showing extreme cordiality and helpfulness so that, agreement having been reached, anglicized versions of the German range began to appear on British roads as Frazer-Nash-BMWs by early 1935. Two models were initially in production, both pushrod o.h.v. 1½-litre "sixes", with transverse leaf i.f.s. and a variety of Continental-looking bodies. The Type 34 was the staidest model, while the sportier Type 40 had three carburetters raised compression and higher gear ratios. These newcomers, with their advanced specification and excellent power to weight ratio, did much to dispel accepted formulae in British sporting car design and soon drove the lesson home by their competition achievements.

Performance Priority

Development of the BMW range continued, 2-litre models soon supplementing the Types 34 and 40 and then, in 1936, the Eisenach engineers, mindful of the revival of interest in sports car racing in Europe, produced the Type 328 as an essentially high performance vehicle. A 2-litre, the 328 employed a 6-cylinder engine of 66 mm. × 96 mm. bore and stroke, giving a capacity of 1,971 c.c. Overhead valves set at 90 degrees were cunningly operated by push rods and rockers from one side, giving the much desired hemispherical head form without the expense of overhead camshafts. Three Solex (continued overleaf)



TT TRIO. The 328 BMWs which took the team prize in the 1936 Tourist Trophy race—the last to be held over the famous Ards circuit in Ulster. Drivers were A. F. P. Fane, B. Bira and H. J. Aidington. This and other photographs mustrating this article were kindly loaned by A.F.N., Ltd.



DENERT RUN One of the team RMW's which took 1/2/3 in the 2-little class of the Tobeux-responsance in U/2/100 mas on the Menaha circuit, scene of the Tripoli Grand Prix, and the permanent pass can be seen in the background

Saga of the "328" BMW-continued

carburetters were used, Bosch coil ignition and plain lead bronze main and big-end bearings. This highly efficient unit, with a compression ratio of 7.5 to 1 and running on fuel of around 80 octane, achieved a comfortable maintained 80 b.h.p. Mounted in a light but stable tubular chassis with transverse leaf i.f.s. and half elliptic rear springing, bearing light but extremely shapely bodywork to A.I.A.C.R. dimensions, the result was a 15½ cwt, 100 m.p.h. motor car. By July 1937 the Frazer-Nash edition of the 328 was available in England at the price of £695, a proposition so good that demand was brisk until production ceased with the advent of war.

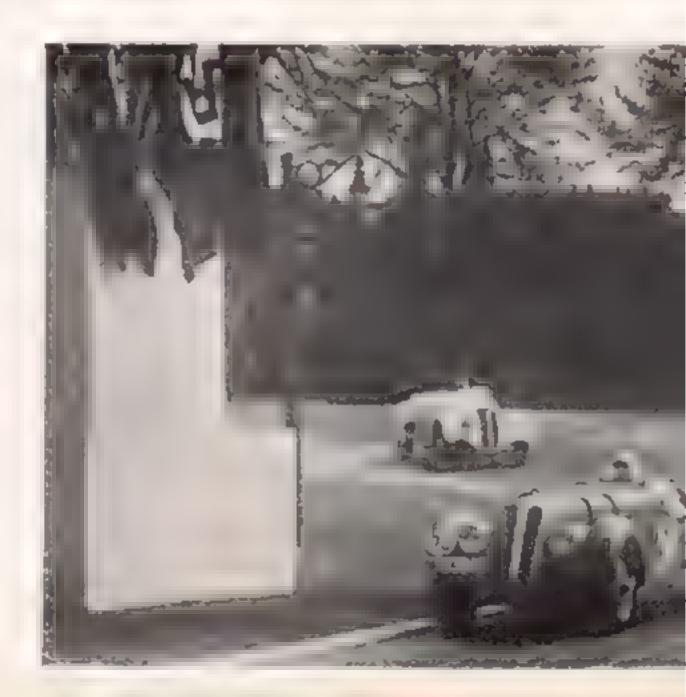
The German 328 made its racing debut, resplendent in national white, at the Nurburg Ring, Germany, in the Eifelrennen sports car race early in July 1936, when Ernst Henne, better known for his successful world's record bids with two-wheeler BMWs, won the 2-litre class. He won handsomely too, his average speed exceeding by 3 m.p h. that of the over 2-litre class winner. Uh Richter was third with another BMW so Eisenach had reason to be pleased with their new model.

Then came the usual setback to a new design (B R.M. critics please note!). In the French Grand Prix at Monthéry, that year restricted to sports cars when the A.C.F got tired of the Italians and Germans winning their big race, a team of white 328s ran in the 2-litre class. They went very well at first, leading the other 2-litre cars comfortably and even occasionally mixing it with the 3½-litre Delahayes. But the race was very long, Monthéry an extremely hard course for the cars, and trouble set in for the German team. Henne's leading car suffered serious loss of oil pressure, which eventually put it into the dead

car park, while Roth and Aldington, both plagued by tyre and other troubles, eventually joined their team mate

British Driver Wins Continental Race

But troubles arise to be rectified, and the Eisenach technicians set to, to remedy the faults Monthéry revealed. Early in August on a road circuit near Munich H. J. Aldington won a resounding victory in the 2-litre



sports car race with a works 328, his average of 85 m.p.h. proving fastest of the day. A fine performance on "Aldy's" part and a vindication of the 328's worth. Came the Ulster "T.T." over the Ards circust in September, when an entry already distinguished by several Delahayes from France gained further international spice by the nomination of three 328s, termed Frazer-Nash-BMWs and sprayed green, drivers being A. F. P. Fane, B. Bira and H. J. Aldington. In a race packed with drama the cars went very well, despite the odd slide and a pirouette or two on damp, greasy roads, and took the Team Prize. Fane finishing a splendid third to Dixon's Riley and Hall's 41-litre Bentley, while Bira and "H J," were respectively 7th and 9th after varied troubles. The 328s also took 1-2-3 in the 2-htre class and the class lap record for good measure. Just to rub it in, Fane then put up best sports car time at Shelsley Walsh with the T.T. car the following week-end.

Thus did the 328 become a power in competitions, and 1937, 1938 and 1939 furnished a procession of successes which established the pre-eminence of the marque in its class. It would be useless to attempt a full list, but amid the welter of "B: y-em-vay" wins some outstanding feats warrant mention. A great personal achievement was A. F. P. Fane's victory in the 2-litre class of the 1938 Mille Miglia, when he drove the entire distance unrelieved having already completed the full 1,000 miles in practice! Three more BMWs with German crews came 2nd, 3rd and 4th in the class. Fane also won the 2-litre class of Germany's Effelrennen in 1937, driving a lap of honour after the race with his garlands of victory on the bonnet and Herr Huhnlein, the Reich's Chief of Sport, by his side. In the Grossglockner Hill-Climb of 1938 Fane shattered the 2-litre record and made fastest climb of all sports cars, while at home he won the 1938 Imperial Plate for sports cars at Crystal Palace and took numerous class awards in British hill-climbs, speed trials and other competitions. Fune's death during the war robbed Britain of a truly brilliant driver.



328 TERRITORY (left). As with most German events, BMWs had things all their own way in the Hamburg Park races. Here we see three 328s cornering on the 4-mile circuit during the 1938 race, an "independent" leading two works cars

BRESCIA BID (Right).
Gillie Tyrer took his 1940
Mille Miglia BWW to the
Jabbeke-Aeltre highway in
Belgium to attack Belgian
standing and flying records.
Engine trouble spoilt the
attempt but he took the
standing kilo. at 78.159
m.p.h.

"100 in the Hour" Sports Car

B. Bira, at that time having much success with his E.R.A.s, took the wheel of a 328 for the 1937 "T.T." at Donington, took third place in the race to two Talbots and won the 2-litre class. Shelsley Walsh, Prescott, Boiness, Beechwood, Lewes, Syston Park, Brighton, Wetherby, Howeleugh and many other British speed venues all saw F.-N.-BMW successes during the period 1937-1939. At Brooklands in 1937, S. C. H. Davis set up an Hour record for sports cars with a 328, at the remarkable average of 102.2 m.p h. Fane, Aldington and others had success in road, mountain and outer circuit races there, while in the L.C.C. 3 Hours race for sports cars, the 1938 substitute for the famous Relay Race, the Isleworth cars won the Team Prize and finished 2nd, 3rd, 4th and 5th.

On the Continent the German team drivers made hay with the various 2-litre sports classes of hill-climbs and road races. Ernst Henne won the Frontieres race at Chimay and the Bucharest G.P. in 1937; Illemann at

(continued averleaf)





FINESSL IN FINLAND. Uli Richter sliding a corner in process of winning the 1939 Grand Prix of Finland, 2-litre sports class, over a circuit in the park at Helsingfors.

Saga of the "328" BMW-continued

Freiburg, 1937 and in the last Avus track race ever, in 1938; Paul Heinemann came to England and I fied the Shel Ley 2-litre sports record in 1937 and won at La Turbie Hill and Bucharest in 1938; Ralph Roese was class under in the 1938 Antwerp G.P. and in the Frontieres G.P. both of 1938 and 1939; Werneck won at La Turbie, 1939; Roth and Richter in the Elaintarhango-Djurdgardslopper—the G.P., of Finland to you and me!—in 1937 and 1939 respectively; and Greifzu won the sports car race at Nurburg on the day Dick Seaman won the 1938 German G.P. with a Mercedes.

Phew! But wait, that is not all. That very fine Rumanian driver, Peter Cristea, famous for his dramatic win with compatinot Zamfirescu and a doped-fabric bodied Ford V8 in the 1936 Monte Carlo R. Ily, did very well indeed with a 328 BMW. He won the 1938 Bucharest G.P. outright, mopped up numerous other B. Ikan events of nomenclatures quite as baffling as the Finnish effort aforementioned, and journeyed all the way to Portug I to win his class in the 1938 Circuit of Vila Rei I. In 1939 he cleaned up the 2-litre racing class at La Turbie and surprised the Germans by winning their Eifcliennen, 2-litre sports class, as Fane had done two years previously

BMW 1 2 3

Some of these events were, it must be confessed, BMW certainties before they started, 2-litre opposition in many of the road races being very hollow, but there are greater feats to record. Prince Schaumburg-Lippe, who ran second to Fane in the 1938 Mille Miglia, drove a markedly handsome BMW 328 saloon at Le Mans in the great Twenty-four Hours G P, d'Endurance, 1939, took fifth place in general classification and won the 2-litre class at record speed, two more BMWs coming 2nd and 3rd. This 1-2-3 placing merely continued an established BMW precedent, but they did even better on the Spa circuit in the Belgian Twenty-four Hours race of 1938, when the three team cars crossed the line in a dead heat. triple winners of first place in the 2-litre class! At Hamburg Park in 1939, H. J. Aldington arrived late with his 328, missing the practice. He nevertheless led the race with much zest until quarter distance when he crashed. whereupon three German 328s moved up and finished in

their customary post tons.

The 1938 Mille Miglia was significant, not only for Fane's brilling drive but for the fatal accidents to spectators which occurred during the race, clusing even the Italians, that nation of terrific racing enthusiasts, to ponder. The result was no Mille Migha over Italian roads in 1939, but instead a substitute race in North Africa where errant cars might run into the sands of the desert rather than into a will of human beings. This race, the "Tobruk-Tripoli", was won outright by Musso mis personal chauffeur, Ercole Baratto, with a 21-litre Alfa-Romeo, but he was chased home ho ly by three team BMWs driven by Briem, Schaumburg-Lippe and Heinemann, who inevitably took 1-2-3 in the 2-litre class. Not content with this, and despite the diversion of something rather grim in the way of wars, BMWs of Eisenach prepared a special team of improved 328s for the 1940 race. This time the substitute Mille Migha returned to Italian soil, but was staged over nine lips of a 102,5 mile (!) circuit passing through Brescia, Cremona and Mantua. Just to add to the fun the event apparently enjoyed the luxury of three tilles, being referred to variously as the Mille Miglia, the Brescia G.P. and the Coppa Brescia. Whatever its true name BMWs won the race with conspicuous ease, to the consternation of the Italians. Huschke von Hanstein driving his saloon (the Le Mans class winning car) the entire distance at an average speed of 103.5 m.p.h., which was very first going indeed and brought him home no less than fifteen minutes ahead of Italy's first representative, Farma with a 21-litre Alfu-Romeo. Three more BMWs came third, fifth and sixth, these being streamlined open two-seaters, and needless to say the Germans took the team prize and class awards.

Post-War 328 Achievements

The Brescia victory marked the end of official BMW participation in motor racing and although the firm, situated in the Russian Zone of Germany, are again producing cars, they have done no racing. The Frazer-Nash and Bristol concerns in this country have, of course, evolved their own improved designs based on the pre-war 328, and with these new productions have glined many splendid competition successes. Production type 328s in the hands of private owners have been raced extensively since 1946, and Frazer-Nash editions in the hands of Leslie Johnson, Oscar Moore, Raymond Way, Tony Crook, G. Tyrer, Miss Betty Haig and many other exponents have notched up an impressive array of class wins at the big post-war hill-climbs, speed tri Is and circuit races. Leslie Johnson gained great prominence for his performance with his Type 328 in the 1946 B Igian G.P. for sports cars in the Bois de la Cambre at Brussels. Throughout the 2-litre race he dustled fiercely with St. John Horsfall's very fast Aston Martin, and despite fading brakes finished second, & min. behind. In the process Johnson made fastest lap of the day, better than any of the big cars, which included Chiron and Sommer with Talbots and Chaboud's Delahaye. Watching the 2-here event, these great drivers warmly acclaimed the BMW driver's prowess, for which he won the Winston Churchill Cup. Johnson's car was purchased by Oscar Moore, who raced it awhile in its original, very lusty form, coming second in the 1947 Swedish sports car G.P.



VERITAS METEOR. The 1949 edition of the 328-based monoposto Veritas which first appeared at Cologne in the hands of Kurl Kling

and gained a number of class wins in British events. He then converted it to a Formula Two single-seater, fitting magnesium wheels and steel-linered magnesium alloy drums with two-leading shoe brakes, etc. If the resultant vehicle, the O.B.M., was not strikingly handsome, it proved effective, for after great perseverence at home and Continental meetings Moore at last struck success this year with the car reconverted to two-seater form, when he won the Manx Cup in the I.O.M. and came third in the Wakefield Trophy race in Ireland.

EX-BMW AFM. Developed from the 328 the Formula Two AFM finalty shed its BMW ancestry with the Vec-8 engined car here seen in the 1950 German G.P., driven by Hans Stuck

The Martin BMW Special

Several 32ss appeared in France, and one owned and driven by Eugene Martin of Paris proved particularly successful in 1946 and 1947. As a BMW it set up fistest lap in the 1946 Nice Casino Cup race, was second in the Marseilles small car race (where Sommer made fistest lap with another BMW) and second at Nantes. Between races Martin was continually modifying and improving his car and at the close of 1946 it won the smill car Coupe du Salon at Monthéry as the Martin BMW Special. By 1947 it had a streamlined offset single-seater body, much altered frame, lowered engine, etc. A.F.N. Ltd. had helped with various vital bits and pieces and the car, drastically lightened and with Martin's expert tuning, proved a considerable headache to the Simca Gordini single-seaters which were then collecting most of the Continental small car events. At Angoulame Martin won the Circuit des Ramparts, was second to Wimille's Simcain the Coupe de Paris and then scored his greatest triumph by winning the Lyons Cup at the French G.P. meeting in September, beating Bira and Wimille f. ir and square. Not content with this, Martin then won two of the three races comprising the Monthery Coupe d'Automne meeting, while Chardonnet (328) won the third, making a triple success for BMW-based vehicles. Other Continental owners met success, among them Legros, who won the 2-litre Frontieres race in 1947 and the Swiss Dutiner who scored in the Develier-Les Rangiers hill-climb.

German Revival

Meanwhile, defeated Germany was slowly coming to life again and ardent motor sport enthusiasts there strove, in the face of great difficulities, to recommence racing. In 1946 they managed it rather shakily, with a hill-climb at Ruhestein in the Black Forest, and curiously enough the winner turned out to be the 1939 European Racing Champion, Hermann Lang, just back after being mistakenly imprisoned for several months on some obscure political charge. And his car? One of the 1940 Bresciatype BMW saloons! At the Hockenheim races early the (continued overleaf)



Saga of the BMW-continued

next year the same car, driven by Karl Kling, won its class at over 95 m.p.h., fastest speed of the day. In the absence of the Auto-Unions and Mercedes, both useless for racing in an impoverished Germany—even were they procurable the straightforward 6-cylinder unblown BMW 328 unit was proving the ideal nucleus for post-war German racing car construction, and inspired both amateur and professional motor engineers to produce new cars.

Most notable of the new fabrieken were Ventas and AFM. The former was founded early in 1947 at Hausen in the French Zone, by Lorenz Dietrich, Georg Meier, Ernst Loof and Werner Miethe. Loof, who had been in charge of the BMW competition department before 1940 (he was earlier a very skilled racing motor-cyclist and a one-time "Continental Circus" partner of Fergus Anderson) chose the 328 BMW as the basis for the new Veritas, altering and lightening the frame and improving the engine by fitting the competition type head with larger valves and higher compression, etc., as used on the Brescia cars. A roller bearing crankshaft and o.h.c. were experimented with, but normal 328 practice was reverted to. An all-enveloping streamlined body with fared-in lefthand drive was fitted, its radiator grille reminiscent of the 1938 G.P. Mercedes-Benz and the tout ensemble of Avus. To build the cars the firm scoured Germany for all possible 328 components, and customers traded in prewar BMWs for rebuilding, the venture gaining financial and moral support from the French authorities.

Success in racing soon came to Verstas, and in 1947, 1948 and 1949 Kail Kling of Stuttgart won the German 2-litre sports car championship, and Georg Meier and Ton: Ulmen the Formula Two Championships in 1948 and 1949 respectively. At Rheims in 1948 Frenchman Eugene Chaboud drove a Veritas into third place in the Coupe des Petites Cylindrées behind two Ferraris, and in 1949 the American Orley came second at Brussels and at Angoulême. Emile Cornet of Belgium won the 1949 G.P. des Frontières and his compatriot Herman Roosdorp won the Dutch 2-litre sports car race at Zandvoort, and then, switching over to his 12-cylinder Ferrari for the German Grenzlandring races later that year, suffered defeat by a Veritas! Soon the first Veritas came to this country, and a party of drivers, journalists, etc. (your own Editor included) sampled Cornet's roller bearinged car on an airfield, finding the German car far more to their liking than the bleak January weather. At a Prescott hill-climb in 1949 K. Hutchison won his class with a Veritas but little success has attended the marque in this country. A single-scater Formula Two racing Veritas "Meteor" first appeared in 1948, with disappointing results, but a second revised edition embodying a Veritas-designed but still very "BMW" 6-cylinder engine with single o.h.c., appeared at Cologne in 1949 and promised well. This year Veritas-Meteors have raced at Berne and elsewhere and development continues parallel with the production of the successful I and 2-litre sports cars and finely bodied passenger models. Last year the thriving firm took over the ex-Mauser factory at Obendorf and currently employs over 250 workers.

The Formula Two AFM

The AFM is the product of another ex-BMW technician, Baron von Falkenhausen, the initials signifying Alex von Falkenhausen Motorenbau, whose modest plant is

in Munich. The Baron successfully raced a modified 328 BMW m 1,500 c.c. class sports events in the first post-war years, becoming German class champion in 1947 and 1948. He then produced the very good looking Formula Two AFM single-seater whose very low weight, new tubular frame, wishbone and helical i.f.s. and de Dion rear axle marked it as Germany's most advanced racing car effort to date. A modified 328 engine was used; the BMW lineage betrayed by the central duct on the bonnet top housing the three carburetters mounted on the centre of the head. The new AFM first ran in 1949, noted drivers being Hermann Lang and Hans Stuck. "King of the Mountains", as the latter is called, had found all his old form, made f.t.d. at Freiburg and at the Swiss M. loja hill-climb (breaking Ruggeri's record with a blown 4CL Maserati) and won the Cologne race. In the 1949 Monza Formula Two G.P., Stuck left the Ferraris of Fangio, Ascari and Villoresi for three electrifying laps before losing twenty minutes with ignition bothers, but still contrived to finish seventh. In the same race this year he won the second heat from Ascari and Fangio with 12-cylinder Ferraris, a great feat for a basically sports 328-engined car. In the final he led off, but had to give up with trouble. In the 1950 Swiss Formula Two race the AFM shone brightly but briefly. Stuck making a meteoric start and leading easily on lap 1. Unfortunately he soon retired and Sommer went ahead. In the revived German G.P. for Formula Two, Stuck drove the keenly awaited AFMdesigned Vec-8 twin-cam-engined car, but again retired after lapping very fast. When race reliability has been gained, it is on this very promising car that the Munich concern are banking their future hopes.

The Rear Engined Monopol

Yet another ex-BMW engineer, Helmut Polensky, produced a BMW-based racing car for post-war German Formula Two races. Polensky's Monopol had seamless tubular frame, and "souped up" 328 engine mounted at the rear, Auto-Union fashion. Torsion sprung trailing link i.f.s. and swinging arm rear axle were employed and the car was most professional in appearance.

Polensky won the Schotten race that year, but had illluck when his car caught fire at Freiburg. The bogey of finance restricted progress of this interesting 2-litre car and Polensky has now turned to 500 c.c. racing with the

Monopoletta.

An example of the ultimate in works-developed 328 BMWs, the 1940 Mille Miglia competition type, has run very successfully in British speed events this year. This car is one of the streamlined open two-seaters and is said to have been driven into third place in the Brescia race by the Germans Brudes and Roese. G. Tyrer, that enthusiastic northern 328 exponent, acquired it and this very high performance 2-litre, now blue and cream and with Frazer-Nash radiator grille, took over two score awards in 1950 and broke Belgium's standing kilo record at 78.159 m.p.h.

Though the production type 328, now a fifteen yearold design, is superseded by improved German and British versions and by varied racing descendants, it remains very far from dead and it is certain that standard models, still highly prized and sought after by discriminating motorists, will continue to shine in the competition world.

TECHNICAL AND OTHERWISE . . . By JOHN BOLSTER

Second Thoughts on Brakes

Is my previous article on brakes, I showed that a moving car is possessed of kinetic energy, all of which must be converted into heat before the vehicle can be brought to a stop. If the car be allowed to go on coasting till it comes to a standstill, the heat will be produced by air friction on the body, and mechanical friction at the wheels and tyres, but exactly the same amount of heat will be generated as if the driver slammed on his brakes and almost set them on fire. The only difference is that a great deal of air will undergo a minute increase in temperature instead of the very obvious local heating of the brakes, but the result, in calories, will be identical.

The result on a road circuit would be very different indeed, though, because powerful braking is just as important as fierce acceleration in achieving good lap times. It was computed by the German technicians, at the time that they were racing their 600 b.h.p. projectiles, that for quite one-third of a Grand Prix race, the brakes were on. The amount of power produced by the engines would vary between 600 b.h.p. and zero, but the total average output for the whole race might be around 200 b.h.p. Those figures are very rough, because of circuit variations, but the point I want to make is that all the power produced by the engine, less aerodynamic and frictional losses, must eventually be converted into heat by the brakes.

Obviously, the brakes of an everyday motor-car are not called upon to release anything like so much energy, but they usually do their work under much less favourable conditions. To begin with, the wheel is probably a disc, which largely nullifies the valuable turbo effect of a revolving wheel. It is a common expedient to pierce holes through the disc, but the circulation thus obtained is not comparable to the free passage of air past wire spokes. Again, the drum is tucked right inside the disc, and shrouded by a fat tyre of small diameter, and the whole thing is then shut away under acres of tin bodywork, thus ensuring that there shall be no brake cooling whatever.

Even racing type wire wheels, or those excellent light alloy spoked ones, would be powerless to do the job under some modern mudguards. One can enjoy a hearty laugh, too, at the pretty little air ducts provided by some coachbuilders, for the volume of air required is very considerable.

It is a sad thing to record that, although brakes have improved more than any other part of the car since vintage days, every effort seems to have been made to vitiate them by the modern stylist. I am full of admiration for the makers of current proprietary brakes and their linings, who have really turned braking into an exact science. The dangerous stage has been reached, though, where the average car has absolutely marvellous brakes for normal use, but at once runs into trouble under

exceptional conditions. Many British motorists have been horrified when their brakes faded out during the descent of an Alp, it is only fair to say that many Americans have had bigger and better accidents, as befits the grandeur of their automobiles. In mountainous parts of the world, one must make regular stops to allow the brakes of one's new American car to cool. This is done as a matter of course by people who want to go on living, but what a farce it all is!

I am convinced that the insistence on absolutely standard wheels and mudguards is right for Le Mans, "the Alpine", and other gruelling stock car events. This will force manufacturers to modify all their series produced cars, instead of merely faking up a team of vehicles that can be stopped. I know that this is contrary to the editorial policy of Autosport, but I do not approve of the racing of "prototypes", and to allow them will kill public interest in these events.

Another dangerous trend that needs watching is the modern trend towards short wheelbases and forward mounted engines. The weight transference on braking is so great that, during an emergency stop, less than 15 per cent. of the total weight may be carried by the back wheels. This effect is aggravated because it is necessary to make the front brakes more powerful than the rear, otherwise the back wheels would lock, and there would be a strong tendency to skid right round.

The extent to which this weight transference can go, is limited by the adhesion of the front tyres and the height of the centre of gravity. All this is worked out, one hopes, by the manufacturer, but when he adds up his sums, he doesn't allow for the cabin trunk that holiday makers are apt to strap on the roof. In the case of many small cars that I have seen thus encumbered, it would be easily possible for the whole caboodle to go end over end under violent braking. One always hopes that the brakes are sufficiently worn to be past their best work, when one sees such an equipage coming towards one.

That this is a very real danger was proved by a friend of mine, who built a closed body on his Jeep. Now I am myself a very satisfied user of a Jeep hmousine, but friend Joe constructed an elaborate masterpiece that was high, wide, and handsome, to say the least. All was well until a phenomenal avoidance necessitated the full use of the anchors, but quickly. The carriage immediately

(continued overleaf)



Second Thoughts on Brakes—continued

went end over end, and, skidding momentarily upon its roof, vaulted back upon its wheels, bounced, and settled in the inverted position for good. Joe lost his grip of the wheel on the first roll, and thereafter became the plaything of natural forces; he did not enjoy the experiment.

In conclusion, let me reiterate that the makers of brakes and of linings now know most of the answers, and are usually most helpful if you have a problem to solve. Various types of linings are available, with different heat resistances, co-efficients of friction, and so on. Don't forget that your car may need a certain type on the leading shoes and another variety on the trailing shoes, or perhaps it requires a "fiercer" hining in front than behind. If you get mixed up over this, you may convert a perfectly good motor-car into an absolute death-trap.

Owners of early cars should watch out particularly, for some of the new hinings can score their drums in a very short mileage. This is all the more disastrous, because many of these old drums are too thin to retain their rigidity when skimmed in the lathe, and are not usually satisfactory when fitted with liners.

One has only to watch a club meeting at Silverstone to see some brakes that work too well, and others that don't work at all. It was that, as much as anything else, that made me write these two articles.

THE VETERAN CAR RUN

Record Entry for London-Brighton Event

ENTRIES for the R.A.C. Veteran Car Run from London to Brighton to be held on Sunday, 19th November, have closed with a total of 163—a record for the event.

Organized annually by the Royal Automobile Club, this Run commemorates the Emancipation Day Run of

1896. Both as a spectacle and as an historical record of the early days of motoring it is unique, and every car taking part this year is at least forty-six years old. The interest it evokes amongst the general public is shown by the crowds which gither each year for the start in Hyde Park, line the fifty-mile route and assemble to welcome the finishers on the sea-front at Brighton.

This year's entry includes fif.y-six different makes, all manufactured between 1895 and 1904. The honour of being the oldest vehicle lies between two Benz cars, a Lutzmann, a Lux and a Leon Bollee, all of which were made in 1896 or earlier. At the other end of the scale are a Vauxhall and a Rover, both manufactured in 1904 and two of the earliest examples of these famous makes.

No fewer than twenty of these veterans of the road are competing in this Run for the first time—two at least—a 1902 Rex and a 1903 Darracq—having been "discovered" this year. Other interesting entries which will be making a first appearance in the event are a 1900 Georges Richard-Brazier (which has not run since 1910); a 1902 De Dietrich, which took part in the Paris-Vienna Race of that year and was exhibited at the London Motor Show of 1903; a 1904 Darracq which was found in a breaker's yard in Hertfordshire and a 1904 Gardner-Serpollet steam car, believed to be the only one in existence.

The Run will start from the Magnzine in Hyde Park at 8.30 a.m. Owing to a rehearsal of the Royal Procession in connection with the coming visit of the Queen of the Netherlands, the route out of London will be via Vauxhall Bridge instead of Westminster Bridge. The cars are expected to arrive at the finish at Madeira Drive, Brighton between 11.30 a.m. and 1.30 p.m. A feature of the event will be the revival of the procession through Brighton of the veterans which, weather permitting, will start at 2.45 p.m. Programmes of the event will be on sale at the start and finish and along the route.



PHI-PHI". Veteran Grand Prix driver Philippe Etancelin, has gritted his teeth and worn his famous back to front cap ever since his early Bugatti racing days. A prosperous wool merchant from Rouen, Etancelin is a great favourite not only with his countrymen but on oil European circuits. Here he is, crouched in characteristic stance, in the 43-litre Lago-Talbot at Silver-stone

Correspondence

WE are delighted to receive letters intended for publication. We do not insist on typewritten copy, but please write in a hand we can decipher, and on one side of the note-paper. The Editor is not, of course, bound to be in agreement with opinions expressed by readers, but this does not mean that subjects will be excluded on these grounds.

With reference to Mr. Charles Lytle's letter in a recent issue regarding the illustration of the Benz racing car, driven by Barbaroux in the Paris/Madrid race in 1903, which appeared in your first number, Mr. Lytle drew attention to the fact that the number on the radiator was 33, and that the number given in my Record of Motor Racing was 315.

I was also puzzled by this fact, and after checking up amongst my papers without finding any solution, I wrote to the Commission Sportive of the A.C.F. to see if any light could be thrown on the

matter

I have now heard from M. Charles Fourreau that Barbaroux's car in the Paris, Madrid race was No. 33, and that there was in actual fact no car numbered 315 in the race, as the entries stopped, curiously enough, at 314. The figure therefore of 315 given on page

188 of my book should be altered to 33.

At this distance of time I am afraid that I have no means of ascertaining whether the mistake was a copying error of mine, or whether it existed in the record from which I took my figures. I can remember spotting quite a number of the latter in the course of copying out the official results, so it is not beyond the bounds of possibility that this is one which I overlooked

GERALD ROSE

N.W.8.

As an enthusiastic Allard owner, may I endorse wholeheartedly the remarks of Godfrey Imhof on the superiority of the independent swing axle. I have owned a number of vehicles with ordinary independent suspension and an even greater number with cartisping suspension, and it is my opinion that for high speed cornering the independent swing axle is by far the safest and fastest.

May I take this opportunity of expressing my sincere hope that the R.A.C. will register a strong protest to the banning of proprietary-engined cars in the forthcoming Monte Carlo Rally,

JOHN H, FARRAR (A M Inst.B.F.)

CALVERLEY, NR. LEEDS.

In the matter of independent front suspension. Messes, John Belster and Godfrey Imhof seem to be in agreement on one point, namely that one can corner faster on eart-springs than on i.f.s.

This brings me to the point of TC M.G. versus TD, so far everyone who has expressed himself on the subject has stated (stated, mark you, not given his opinion) that the TD corners faster than the TC, yet here we have two enument men in the motoring world who would seem to imply that they hold the opposite opinion.

If that is so and their statement is correct—then the M.G. Car Company have indeed sold their souls to the devil in producing

their 1950 popular model.

I am the proud owner of a TC, and I have no intention of ever exchanging it for a TD which, for one thing, corners far too much like an ocean hier for my liking. It may be slightly faster than the TC on a road-test when neutral conditions are experienced, but given a little assistance from wind or gradient—one encounters a dead level road about once in a lifetime in this country—the higher gearing of the TC is bound to tell; I can get a true 75 m.p.h. at 5,000 r.p.m. with ease.

TD fans point to the acceleration which, according to the motor,

is A of a second faster from 0-50; but with the same gear ratio the TC could improve on that by about a second—b.h.p. per ton tells you that. And is there any reason why the TC should not have an alternative axic-ratio? How are the Americans liking the lower gear ratios on their fast roads? I have heard of TCs being cruised at 4,700 r.p.m. for hours on end, but there aren't many Americans cruel enough to cruise at 5,200 or so which it would be in the TD.

As John Bolster told us in his road test of the HRG, that company have gone out of their way to keep the engine off peak revs in top-gear, yet here we have the M.G. Company doing the exact opposite! Use the alternative gear-ratio, I hear some one say, very well, then, but now where's that acceleration with which to

tease those big American cars?

What does the U.S.A want with i.f.s. anyway? They can get that spongy kind of ride any day in one of the products of their own country. And surely if any country has roads straight enough and smooth enough for cart springs, which few have disputed are better than i.f.s. for travelling in a straight line—it is the U.S.A. And what about those disc wheels which your journal tells us the Americans won't take any more?

I submit that since the U.S.A. is M.G.'s biggest customer these

questions I have raised are of vital importance.

V. S. JOHNSON.

CAMBRIDGE

In reply to 'GotI' Imbof I hasten to state that I have driven several Allards, and emoved handing them very much. My article, however, was an attempt to show, in limited space, why it is possible for such people as my friends Bob and Brian to keep in front of those latte red motor cars round corners. The A and was obviously not germane to my argument, and I don't think I showed any personal preference for a particular form of suspension.

However, I shall include the split front axle in a future article, and shall endeavour to dispel the mystery that surrounds gyroscopic

precession.

JOHN V BOLSTER.

WROTHAM, KENT.

I smoot to like to add an endorsement to the sentiments expressed by Mr. Ian Ruston (Autosport, 27/10.50). This gentleman truly expressed how very much we owe to Raymond Mays, also to Peter Berthon. The least we can do is to see that they get all the backing they need.

As you yourself have said, the "set up" of B R M, enterprise is not ideal, and certain aspects of the Trust's policy and publicity can be enticized, but perhaps it is the best that could be devised

under the circumstances. No doubt it will improve.

I am certainly 100 per cent, behind the whole idea, and as regards

the car itself, I am sure that it is the thing.

I was fortunate enough to be at Barcelona recently, and I submit that, though both B R M.s failed to finish, they certainly showed their potentialnies. Peter Walker, not quite as you reported.

"a" left on the line, having, I was told later, unfortunately stailed his engine. Nevertheless, setting off a good half minute or more after all but one other of the field had disappeared, he worked his way up to fifth position by less than half distance! This, coupled with Reg Parnell's meteoric first lap, and practice performance, gives us an dea of what can be expected

One thing though, in regard to your remarks that the drivers' practice was curtailed by testing, this does, on the face of it, point to bad organization. Surely, in such circumstances, the drivers should have been given the maximum possible chance to practice,

particularly Peter Walker!

I hope you will continue to strike the excellent balance with international racing and club activities, and not drift too much to the latter as some correspondents seem to advocate.

K. J. BLYTHE

HEMEL HIMPSTEAD

(continued overleaf)

M. V. Ouick.

Correspondence—continued

THE letter from John N. Deacon (27th October) implies possession of a lot of very rare information. Leaving aside the amazingly definite assertions regarding the power output of the lastest German supercharged mulus, the following extract calls for comment: "Of the present day unblown I-htre motors, both the Gilera and M.V.-Agusta fours develop more power and at higher revs than the 1950 Works Norton-let alone the standard double-knocker Manx type motor as pictured on page 202,"

Since when, I wonder, has Joe Craig taken to publishing the logs of the experimental engine tests? Also, since when has it been possible to get held of reliable figures as opposed to propaganda from any

Italian works⁹

Moving away from the realm of paper performance and surveying the 1950 racing season we see Duke and Co, wittning against the Continental multis. Riding had something to do with it, but there is no getting away from the fact that Duke was leaving the M V. on the straights. It is irrelevant to point to 500 c.c. championship results because we don't want to go into a lot of unpleasantness

about tyres,

I have no doubt of the potential superiority of the multi over the single in the matter of revs and power output. It is simply that, due to the tenacity of Nortons in developing a particular basic design of 500 c.c. single to a point beyond anything that the theorists could foresee, the multi exponents have been compelled to revise their estimates and they are finding that the level of output at which they can hope to begin to show their ascendency is a good deal higher than they first expected

Next season may see them producing the relatively higher proportion of power at the wheel which theoretically they promise Mr. Deacon specifically refers to "present-day motors", however,

F, B, Ryoer,

BROMBOROUGH, CHES.

IN reply to sour correspondent John N. Descen, I would like to I state a few facts and figures concerning 500 c.c. engines. Of the Gileras, the three factory jobs gave at the beginning of 1950 484. 474 and 45 b.h.p. at approx. 9,000 r.p m. Now a considerable time ago Joe Craig of Nortons was obtaining 55 b.h.p. on the bench at considerably less r.p.m. than the Gilera. Looking over last season's race records it will be seen that Nortons swept the board in most Grand Prix races, often on courses which were lapped at over 100 m.p h, proving that on that type of circuit the Gileras and M N s were not faster than the Nortons, whereas the superior power (?) and agreer construction of the Gilera, should have offset many times the better steering and roadholding of the Nortons,

For the record the standard Grand Prix Triumph knocks out 45 b.h.p. at 8,200 r.p.m.—one wonders what the works model

develops.

The dirt track short rod 4-stud J.A.P., a motor that was designed for power "low down" puts out 45 b h.p. at 6,300, and with a slight toss of low down power will give 48 b.h.p. at peak revs and this a motor with cast from head and barrel, push rods, and no huge valve overlap. In fact some standard touring machines have better

read mes

One thing that puzzles me is that very few speedway mechanics have been "in on" the "500 racing cars. When one considers the g eat number of JAP engines in use I am sare that the direct tariers would be very glad and very keen to give a helping hand to the many owner drivers who are not so mechanically it added as men of the calibre of Alex Moseley, Cyril Spinis, Dick Stewart, Bert Dixon, etc.

By the way I should state that I am it no way connected with the

factories of J.A.P., Triumph or Norton.

NORMAN MACKENZIE

GLASGOW, S. W.2.

THINK your 'High Peak' photographer might be interested in Ithe enclosed print, apparently he and I must have pressed the "trigger" at the same time, as his photograph on page 293 of Autosport shows me in action—and behold I take his portrait!

R A BOYD.

Having just read Godfrey Imhof's letter on John Bolster's very interesting article on i.f.a. versus Cart-Spings, I would like to point out that two trailing link 1,f.s. provides constantly vertical wheels, as well as the advantages of i.f.s. The stability of the D B. Astons at Silverstone and Le Mans shows that it really does work well. A friend who has just been in a D B. Aston Martin says it was exceptionally comfortable, as well as stable. Also Dr. Porsche, probably the finest designer to-day, uses them on the wonderful Volkswagens—and had them on the Auto-Unions. 🖫

READING,

see from the Dain Express that the French Drivers were excluded from the Rally for not having R.A.C. British Competition Driving Licences. In view of the entry form stating that it must be completed in all details how did their entry come to be accepted when many other entries were waiting with the qualifications

It appears that this Rally from many aspects will not have done the Sport much good, but may have done some harm. In the first instance certain clubs were invited to take part (I suppose that for this privilege they were expected to help with the organizing) but by the time members of these clubs received copies of the regulations the entry list was closed. Why not have reserved a number of places for members of each club invited? We are told that 75 per cent, of the entries were from new competition drivers, so one can only presume that many of these joined the M.C.C. for the duration of the fally at the special fee of 10s. This is poor consolution for the invited clubs and their members who support the Sport all the year round, and also do their share of marshalling when needed

These new-corners to rallying have been chasing about the country thinking they were in a race, and in this they have been encouraged by the Daily Express. Quote the Daily Express 10th November-Last sentence of the report-"An inch long crack in their petrol tank put C. M. B. Kite and R. M. Hewlett out of the race." This is a sure way to have the public and authorities crying out that fallies are dangerous and must be banned.

It is to be hoped that next time a national rally is being organized

some consideration will be given to these points,

R. V. CRESSWELL.

HIPPERHOLME, NEAR HALIFAX.

(Below). The "High Peak" picture taken by our correspondent R. A. Boyd., The AUTOSPORT photographer is marked with an X



MELLOR, CHES,

Portrait Gallery

KEN WHARTON



Copyright reserved for the Artist

by A. T. M. ACKET

KEN WHARTON of Smethwick is surely the most versatile driver of to-day. Equally at home in races, trials, sprints, hill-climbs or railies, he has gained many victories in all five types of event. His post-war record of trials wins may never be emulated, and he was R.A.C. Trials Champion in 1948 and 1949. This season he took up racing in a Cooper with conspicuous success. His rally successes include the "Lisbon" and "The Tulip".

News from the Clubs

COTSWOLDS CLASSIC

The Roy Fedden Trophy

THE Bristol M.C. and L.C.C. are staging their Roy Fedden Trophy Trial on 25th November. This has for many years been the Club's premier trail event, and is included in the B.T.D.A. Championship. The course which covers approximately 75 miles, is laid out in figure 8 fashion and includes many tough sections, including the notorious Breakheart Hill. Entries are divided into three classes for ears up to 1,100 c.c., over 1,100 c.c. and not exceeding 2,500 c.c. and over 2,500 c.c. The start is at 10 a.m. from the Cross Hands, Old Sodbury, and cars go off at minute Hery is, odd numbers proceeding on one half of the figure 8 and evens the other.

PLYMOUTH'S "MANCUNIAN TROPHY"

Third Annual Sporting Trial

IN brilliant sunshine a cheery crowd of trials enthusiasts left Marley Head on Sunday, 5th November, for the first stage of the Plymouth M.C.'s Mancunian Trophy trial over a thirty-mile course. Among a variety of interesting sections Gibbet, whose sticky mud packed itself tightly into

Club Secretaries are invited to send details of the activities of their Clubs. for racinson on this section. We would like you to regard this in the nature of a weekly Club Magazine, and a speedy way of informing your metabers 45 to future happenings.

tyres, defeated all the entry, E. Orchard (Dellow) in each of two attempts getting highest up.

Mount Pleasant, the final section, had a sting in its tail, all cars climbing the first time but in the second run a restart high up in the grass proved the undoing of many. Tea at the bottom and a "Twenty Questions" session concluded one of the most enjoyable events of the year.

Results

E. Orchard (Dellow), 'Mancunian Trophy", 100 marks; A. Cleave (Morns), Club Award, 88, E Eths (BMW), 1st Class Award, 86.

ANOTHER NEW CLUB

Opportunity for Welsh Enthusiasts

CINCE the close of the racing season, Othere has been a considerable amount of discussion in the locality about the possibilities of promoting motor sport in Wales, and the possibilines of acquiring an aerodrome circuit locally

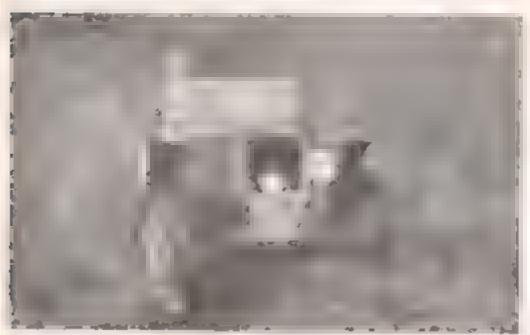
At very short notice, a few dozen enthusiasts convened a meeting to discuss the possibilities of such a project succeeding in Wales. It was unanimously agreed that there was room for a club to be formed, which would promote motor and motorcycle racing locally. It was decided that the ti le of the club should be "The Welsh Motor Racing Club", and that the headquarters should be at the Mermaid Hotel, Mumbles.

A small committee was elected pro tem, consisting of Mr. Dick Williams, Mr. G. Snell and C. W. Kieft, and a General Meeting at the Mermaid is being called on 6th December (8 p.m.) when a motor racing film will be shown. Admission is free, and all motor racing enthusiasts, whether members-to-be or supporters, will be welcomed. At the meeting it is intended to elect the officers of the club

TREASURE HUND

Sunbeam Register Point-to-Point

CTARTING and finishing at the Lambert Arms Hotel, Aston Rowant (London A.40-Oxford B 4009) roads) a Point-to-Point Treasure Hunt will be staged on Saturday. 9th December, by the Sunbeam Register, a vintage-minded organization whose aim it is to bring to-



R. A Hopkinson's Bancroft Special (above) openly reveals its transverse eart-spring front suspension while wrestling with Tank Trap in the Crewe and S. Cheshire M C.'s Clifford Cup Trial, held on 5th November.

(Right), First Class Award winner Cyril Corbishley tackling the Sand Pit during the "Clifford"



gether all owners and enthusiasts for the classic Wolverhampton built Sunbeam car.

Competitors will be required to cover a course of from 40 to 50 miles by solving clues to take them from point to point and to acquire certain "treasure". It will not be necessary to damage the car or commit criminal offences, nor will navigators be embarrassed. Further details from the Sunbeam Registrar, Mrs. W. Boddy, Carmel, Wood Lane, Fleet, Hants.

NO HERES COUNTY AUTUMN TRIAL

Week-end Event Off

UNAVOIDABLE circumstances have compelled the Herts County Automobile and Aero Club to cancel their Autumn Trial, which should have taken place on 12th November.

WHIPSNADE FILM SHOW Mobiled Features by Bedfordshire Club

On 8th December, 1950 at 8 p.m. the Sporting Owner Drivers Club have arranged with the Mobiloil Co., to show at the Chequers Hotel, Whipsnade, a number of films taken during the last season's racing. Non-members will be welcome.

On loth December, the club plan to hold a Night Navigation Trial to which members of the A.C. Owners, Chiltern, and Berkhamsted Clubs are being invited. Further details can be obtained from the Hon. Trials Sec., W. P. H. Lockhart, 50 Eaton Bray Road, Northall, Dunstable.

FRONT-DRIVE FROLICS Citroen Night Time Trial

The Citroen Car Club Night Time Trial was held on Saturday, 4th 5th November. Twenty-six Citroens were entered, including one by a visiting member from Singapore, and all drivers, navigators and passengers assembled at the Victoria Hotel, Egham, Surrey, for the start on the Egham by-pass. No. 1 car was off the mark sharp on schedule at 9 48 p.m., the others following at three-

COMING ATTRACTIONS

November 18. Harrow C.C. Cottingham Memorial Trial, Chilterns Ulster A.C. Irial, N. Ireland.

November 19. Leicestershire C.C., John Bull Trophy Trial, Leics. Berkhamsted M.C. and C.C. Lockhart-Bossingham Trial R.A.C. Veteran Car Run, London-Brighton.

Ryhl. and Dist. M.C. Regal Trial,

N. Wales.
Southsen M.C. Hunt Trophy Trial,
Hants.
Plymouth M.C. Turnbull Trophy
Trial

November 25. Bristol M.C. and L.C.C., Roy Fedden Trial, Cotswolds

November 26. Kentish Border C C November Sporting Trial, Kent. Vintage S.C.C. Bisley Rally. Yackshire S.C.C. Pennine Trophy Trial Ringanden

minute intervals until all were away by 11.03 p.m.

The first check point was at the Milestone outside Reading on the Newbury Road, the course continuing through Newbury where another check was made outside the town and then on to the Whitchurch check and through Botley to Hamble. Between Whitchurch and Hamble a secret check point had been organized

On arrival at Hamble all competitors refuelled, then rested for a couple of hours at the Coronation Arms, whose proprietor, a club member, really went to town in looking after everyone. A fresh start was made at 3.13 a.m., competitors continuing in the same order and at similar intervals to check points at Salisbury, Wincanton, Shepton Mallet and thence to the finish at Frome. At 6.18 a.m. as first light was breaking the competitors began to arrive and were duly parked and ushered into

A I members expressed their apprecant on of the event and are now very any ous to get down to the preparation of next year's programme.

RESULTS

Premier Award—J. Marten 1st Class Awards—P. Caroline, J. Goodnan.

2nd Class Awards—C. Rowling, G. Walles, G. Gale, E. Guffiths.

GORDON MOSBY DOES IT AGAIN

Northern Driver wins Cheltenham Trial

THE Cheltenham M C.'s Trial on Saturday, 11th November, was won by G. P. Mosby (Ford). Provisional Results are as follows:—

Best Performance of Day-G. P. Mosby (Ford).

Best up to 1,000 c.c.—P. A. Atkinson (Austin)

Best Performance in Class A-K. E. O. Burgess (Burgess).

Best Performance in Class C-C. R. L.

Nicholl (Ford).

First Class Awards—C. L. Bold (Bold),
J Deeley (Cranford), C Corbishley (C.C.S.),
O. Bartlett (Bartlett), D. W. Price (Price Spl.), R. W. Phillips (Fairley), B. K. Thomp-

son (Wharton), J. Bulivant (Bitza Ford), B. H. Brown (Dellow), V. S. A. Biggs (Ford), A. A. Butler (Clegg), L. G. Evans (Dellow), J. Clegg (Clegg), A. M. Beardshaw (A M B), A. W. Francis (H R G Mercury).

I cam Award -Sheffield and Hallamshire M C.—A. A. Butler, B. K. Thompson, J. Clegg, 29 marks lost.

N.W. LONDON ANNUAL

Abbey Hotel December Fixture

THE North-West London M.C. are holding their Annual Dinner and Prize Giving in the Abbey Hotel, North Circular Road, N.W.10 on the 14th December

CECIL KIMBER TRIAL

12th November, 1950

THE North-Western Centre of the M.G. Car Club returned to its course of two years ago for the 1950 edition of the Cecil Kimber Trial held on Sunday, 12th November. Two non-starters meant that twenty-two M.G. cars left Macclesfield Station, Buxton Road, to cover the twelve miles; it was a most concise twelve-mile course, which included three tests, two observed sections and one timed climb.

The weather started bright and blue but ensuing rain meant sticky going on the two observed sections the first of which, Quarry, was subdivided. This proved the undoing

(continued on page 416)



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 - c. J. P. Wimule racing a 158 Alfa at Berne,
 - d. Sir H. Birkin racing a Bentley at Le Mans.
- e. Reg Parnell winning the Richmond Trophy at Goodwood with a Maserati.
- Raymond Mays racing an E.R.A. at Shelsley.

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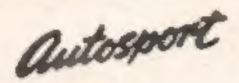
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FIRST POST, MONDAY

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H.R.G.

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1934 Riley "9" Monaco Saloon, good tyres, new French Talbot saloon, 17 h.p. Good runner. £35. Ring Slough 10728.

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Cecil Kimber Trial—continued

of many, for five only managed Quarry One and nine Quarry Two, known generally as The Knob. It was obvious that the first corner of Quarry One required a maximum of lock although Bob Oakes seemed to make it look easy. On his w'heels Jim McKie also made light of a section which was to lose what little surface it had with the rain, for after Jim (a visitor from the Midland Centre) we had a string of failures. Denis Wyatt was the first to show what might happen if the front wheels weren't placed correctly for he mounted the bank in a most enthusiastic manner to the no little chagrin of nearby lady spectators. He was the first of many to show us the underside of his chassis but Douglas Ryder restored our faith by a well-judged clean effort. Then came Ken Scalesa Class II entry—and with great cunning he placed his wheels at an oblique angle to get a major amount of turn on the bend. His judgment was proved by a magnificent climb and his urgeful motor did the rest. Oddly enough he had failed on The Knob. Of the Quarry One failures possibly the most exasperating were John Dalton who negotiated the corner but failed higher up, and Alan Hopkinson who by sheer bad luck and bad surface slipped into a rut which left his wheels high but hardly dry! Alan had earlier gone a long way towards victory by two cracking times on the first two tests but this failure jeopardised his chances.

The only other observed section, which took its name, Egypt's Café, from a nearby tea-house, was a hundred yards or so of steepish, straight climb. Here again the rain had made the surface bad and ten cleans were all that could be recorded. Following this was a special Reversing Test.

The finish at the Dixon Arms Hotel brought another test which

1939 TRIUMPH 2-hirs Sports Saloon, Radio, meer's condition. £475, 1949 JOWETT JAVELIN, one owner, 8,000 miles, 1948 JOWETT JAVELIN, one owner, 7,000 miles, 1948 With red leather, guaranteed, 1925, 1939 MORRIS 10 saloon, chauffeur mentained, black with green leather, guaranteed, £450, G. W. WILKIN Ltd., Weston Park, Kingstonon-Thames, Kingston 2241-2.

THE SPORTS CAR (M.G. Magazine) No. 1. (April, 1935) to No. 31 (June, 1939) complete, unmarked. What offers! Box 272.

consisted of starting from a line, proceeding forward and sharp left into a "pen" rather like one of those things at Sheep Dog Trials but made up, approximately, of oil drums and planks, then reversing smartly and going forward out of the pen sharp right and back over the start line. Bob Oakes was fastest here and along with his clean sheet it landed him the North-Western 1950 Kimber-More polishing, Bob!

If the day was spoilt it was only by the rain, for otherwise the event was a most enjoyable affair with a course small but interesting. In spite of a 12.30 start the results were completed by Bill Woolley at 4.15 p.m. A record! They were as follows:-

Cecil Kimber Trophy-R. Oakes (TC), 0 marks lost; 2nd in Class I. J. McKie (TC), 0; 3rd R. A. Hopkinson (TC), 6; 4th J. E. O'Hanlon (TD), 6.

Class II-(Supercharged cars and over 1,500 c.c. U/S) Special Award, H. Jenner (TC), 6 marks lost.

Team Award-"Clatterbusses", D. Wyatt (TC), B. D. Norris (TC), R. A. Hopkinson (TC).

TERPSICHORE AT DROITWICH Midland M.G. Annual Dance

THE M.G. C.C. Midland Centre Annual Dance together with running buffet and presentation of awards is being held again this year at the Chateau Impney, Droitwich on Friday, 24th November, commencing at 8.30 p.m. Tickets are going well, everyone being welcome, and can still be obtained at 17s, 6d, each (30s. Double) from the Social Committee chairman, W. W. Wallis, "Keynton", Streetsbrook Road, Solihull, Warwickshire.

PETERBOROUGH'S BARRETT TROPHY TRIAL

Denis Flather (Keystone) Wins

THE Peterborough M.C.'s recent Annual Trial for the Barrett Trophy was held in the Rutland and Leicestershire district.

Results

Best Performance—D. G. Flather (Keystone Special).

Best Performance in Opposite Class (Standard Cars)-T. A. Marshall (Sheffield and Hallamshire M.C.) (1,250 M.G.).

Best Performance by Member of Promoting Club-R. H. Cook (Pipe Tom Spl.). 1st Class Awards-E, H. Boot (Bot-cow Spl.), T. E. A. Manning (Morris Minor).

2nd Class Awards-H. E. Mayes (Mayes Spl.), J. Staresmore (847 M.G.).

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at in class, Gosport Sprint 1949

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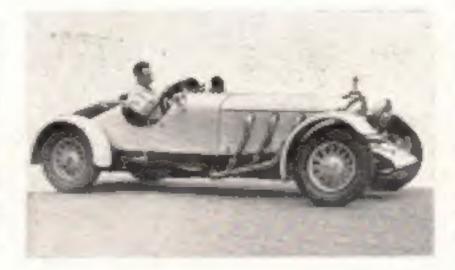
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At the moment we have for disposal 1935 Lagonda Rapide (choice of two); 1928 2-seater, large slab tank, 4½-litre Bentley; 1926 Frazer Nash Anzani; "Boulogne" Hispano Suiza fixed head coupé; and team car, long-chassis, Aston Martin "Le Mans".



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January, Ceylon, F.T.D. 500 c.c. New Zealand Grand Prix, 4th, 500 c.c. F.T.D.

2 hill climbs.

Monthery, 1st and 3rd, 500 c.c.

14th May, Mons., 1st, 2nd, 3rd, and 4th, 500 c.c.

14th May, Hockenheimer Ring Heidlberg, 1st.

21st May, Monte Carlo, 1st and 2nd, 500 c.c. 27th May, Air Le Bains, 1st, 2nd and 3rd, 500 e.c., 1,100 c.c. lap record.

11th June, Angouleme Grand Prix Remparis,

Ist, 500 c.c.
12th June, Zandvoort, 1st, 2nd and 3rd, 500 c.c.
11th June, Oslo, Norway, 1st and 3rd, 500 c.c.
18th June, Grenobles, 1st, 500 c.c.
2nd July, Rheims, 3rd, 500 c.c.

23rd July, Zandvoort, 1st, and 3rd, 500 c.c. 30th July, Rouen, 1st, 2nd, and 3rd, 500 c.c. 13th August, Gap, France, 1st, 500 c.c. 1st, 1,100 c.c. F.T.D. lap record.

14th August, Ostend, 1st, 2nd, 3rd, and 4th, 500 e.c. 3rd September, San Sebastian, 1st, 2nd, and

3rd, 500 c.c. 17th September, Perigeus, lap record. Australia, 50 mile race, 1st, 100 c.c. GOODWOOD, 10th April 1st and 2nd, 500 e.c.; Lavant Cup, 1st, 2nd, 3rd, and 4th; Handicap, 1st.

GRAVESEND, 7th May 1st, 2nd, 500 e.e. and F.T.D.

SILVERSTONE, 13th May HEAT 1, 1st, 2nd and 3rd; HEAT 2, 1st and 3rd; FINAL, 2nd and 3rd.

BRANDS HATCH, 16th April 1st, 2nd and 3rd.

PRESCOTT, 20th May 1st, 1,000 c.c. Class; 1st, 1,500 c.c. Class; team prize.

GOODWOOD, 27th May HEAT I, Ist, 2nd; HEAT 2, 1st and 2nd; FINAL 1st, 2nd and 3rd.

BLANDFORD, 29th May LOMBARD TROPHY, 1st, 2nd and 3rd; 500 c.c. RACE, 2nd and 3rd.

SHELSLEY WALSH, 19th June 1st, 1,500 c.c.; 2nd, 500 c.c. F.T.D., lady driver.

PRESCOTT, 11th June 750 c.c. Class Record, F.T.D. BO NESS, 25th June 1st, 2nd and 3rd, 500 c.c.; 1st and 3rd, 1,100 c.c., F.T.D.

BRANDS HATCH, 25th June RACE 1, 1st, 2nd and 3rd; RACE 2, 1st, 2nd and 3rd RACE 4, 1st, 2nd and 3rd.

TEWIN WATER SPEED TRIALS, 18th June 2nd and 3rd, 500 c.c.; 1st, 1,100 c.c.; 1st, 1,500 c.c., F.T.D.

REST AND BE THANKFUL, 2nd July 1,000 c.c. Class, 1st, F.T.D.; 500 c.c. Class, 1st 2nd and 3rd.

SILVERSTONE, 26th August (at, 2nd and 3rd, 500 c.c.

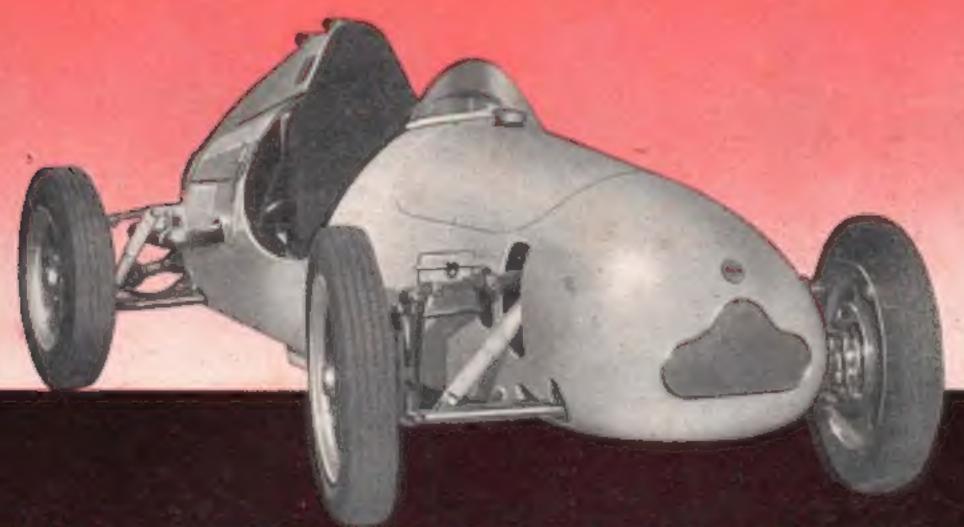
SHELSLEY WALSH, 23rd September 1st, 500 c.c.; 1st, 1,100 c.c.; 1st, 1,500 c.c.; 500 c.c. Record.

GOODWOOD, 30th September 1st, 2nd and 3rd, 500 c.c.; 1st, 1,100 c.c.; 1st, in the 4th Handicap.

CASTLE COMBE, 7th October
1st, 2nd and 3rd, 500 c.c.; 1st, 2-litre; 3rd,
General Classification.

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